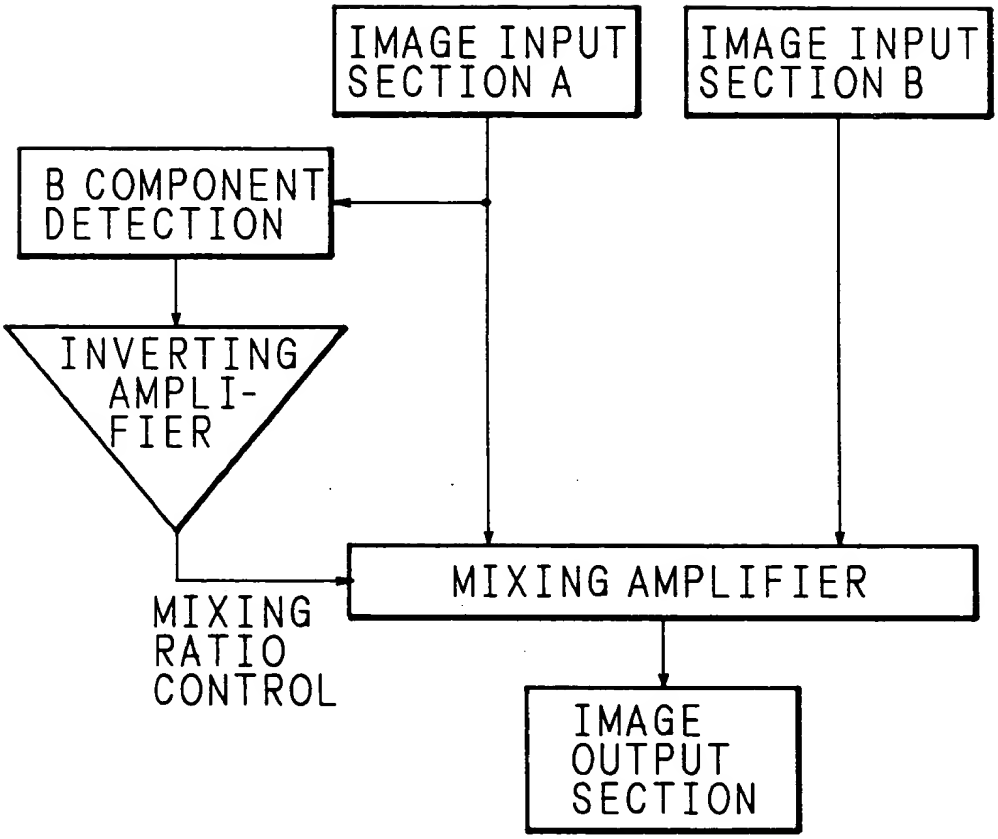
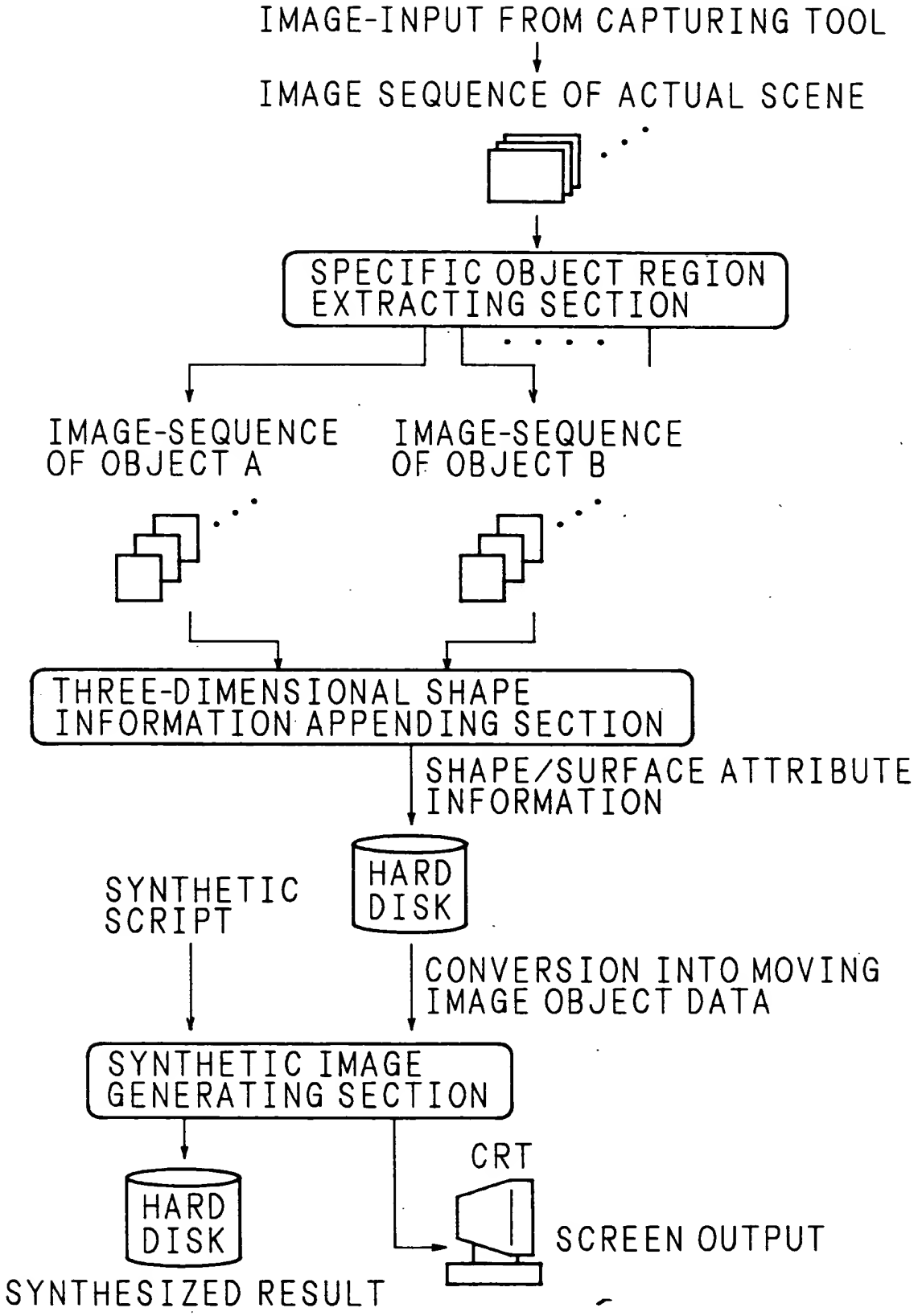
FIG. 1
PRIOR ART



US005438366A

FIG. 2



US Patent No. 6,084,590

FIG. 3

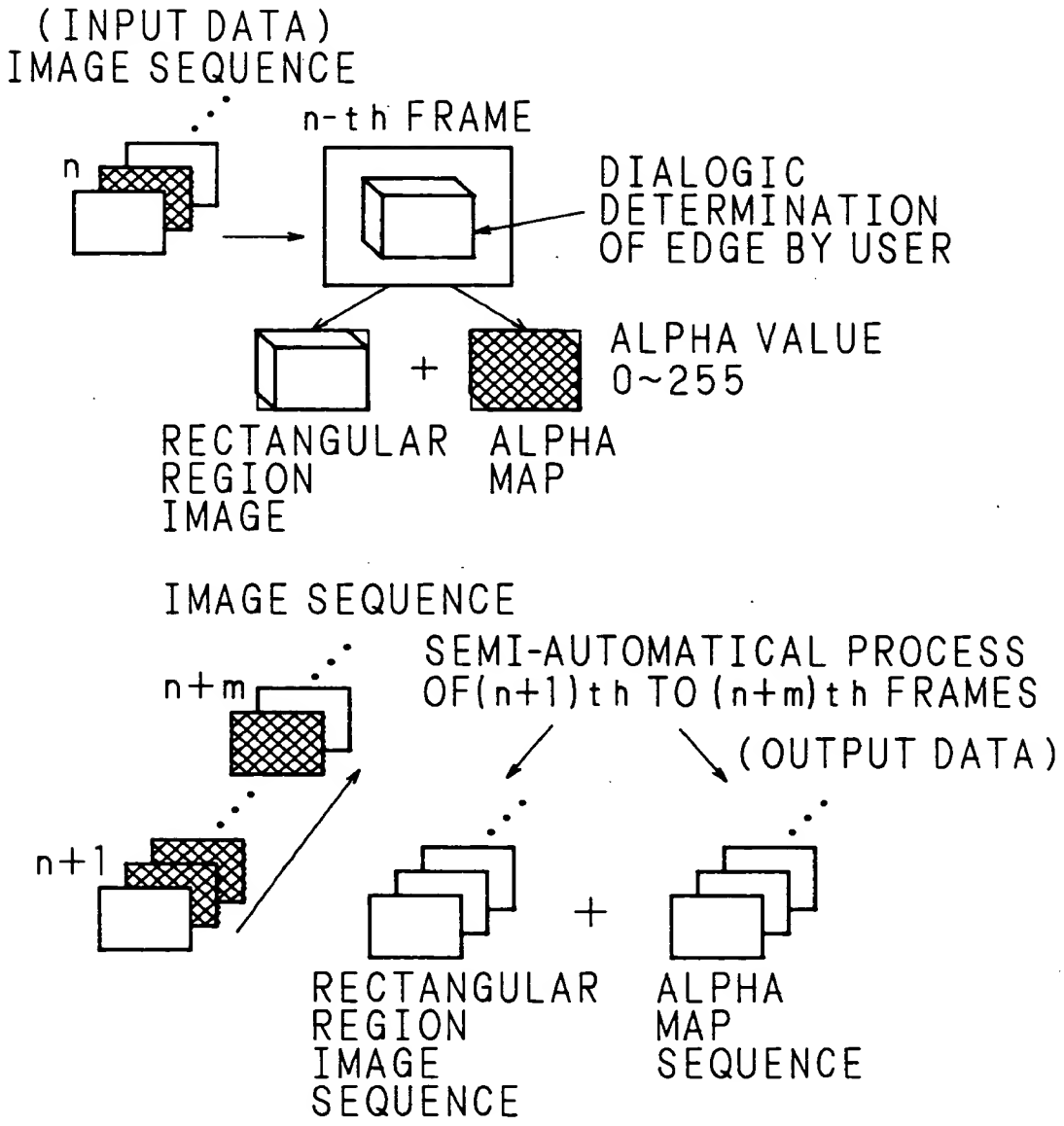

(INPUT DATA)
IMAGE SEQUENCE
n-th FRAME
n
DIALOGIC
DETERMINATION
OF EDGE BY USER
+
ALPHA VALUE
0~255
RECTANGULAR
REGION
IMAGE
ALPHA
MAP
IMAGE SEQUENCE
SEMI-AUTOMATICAL PROCESS
OF(n+1)th TO (n+m)th FRAMES
n+m
(OUTPUT DATA)
n+1
+
RECTANGULAR
REGION
IMAGE
SEQUENCE
ALPHA
MAP
SEQUENCE

FIG. 4

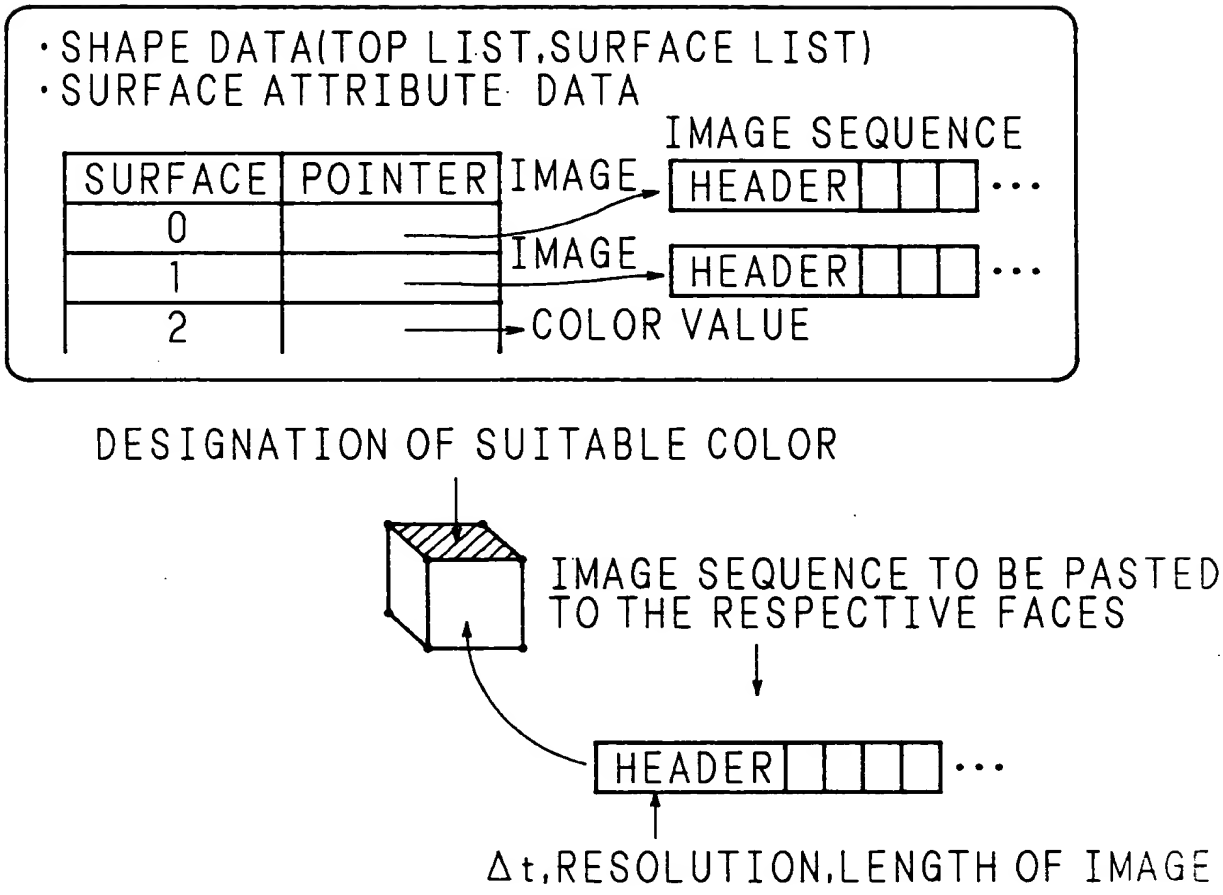
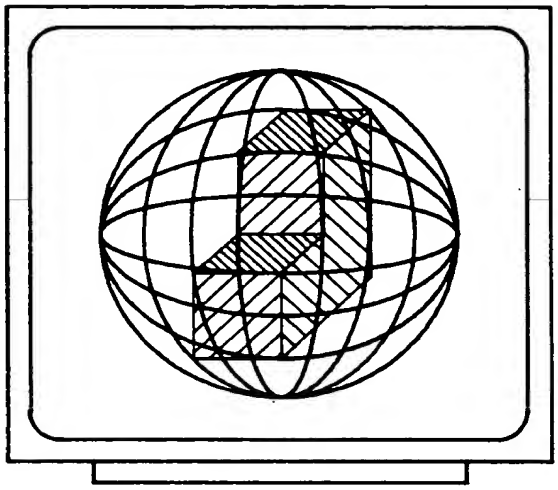

·SHAPE DATA(TOP LIST,SURFACE LIST)
·SURFACE ATTRIBUTE DATA
IMAGE SEQUENCE
SURFACE
POINTER
IMAGE
HEADER
0
IMAGE
HEADER
1
2
COLOR VALUE
DESIGNATION OF SUITABLE COLOR
IMAGE SEQUENCE TO BE PASTED TO THE RESPECTIVE FACES
HEADER
Δt,RESOLUTION,LENGTH OF IMAGE

FIG. 5



0948575 2003987

FIG. 6

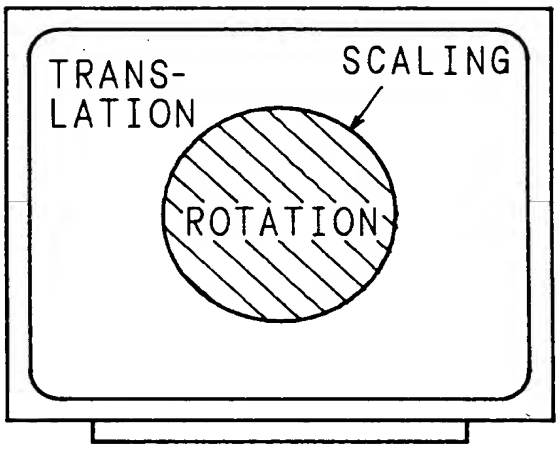


FIG. 7

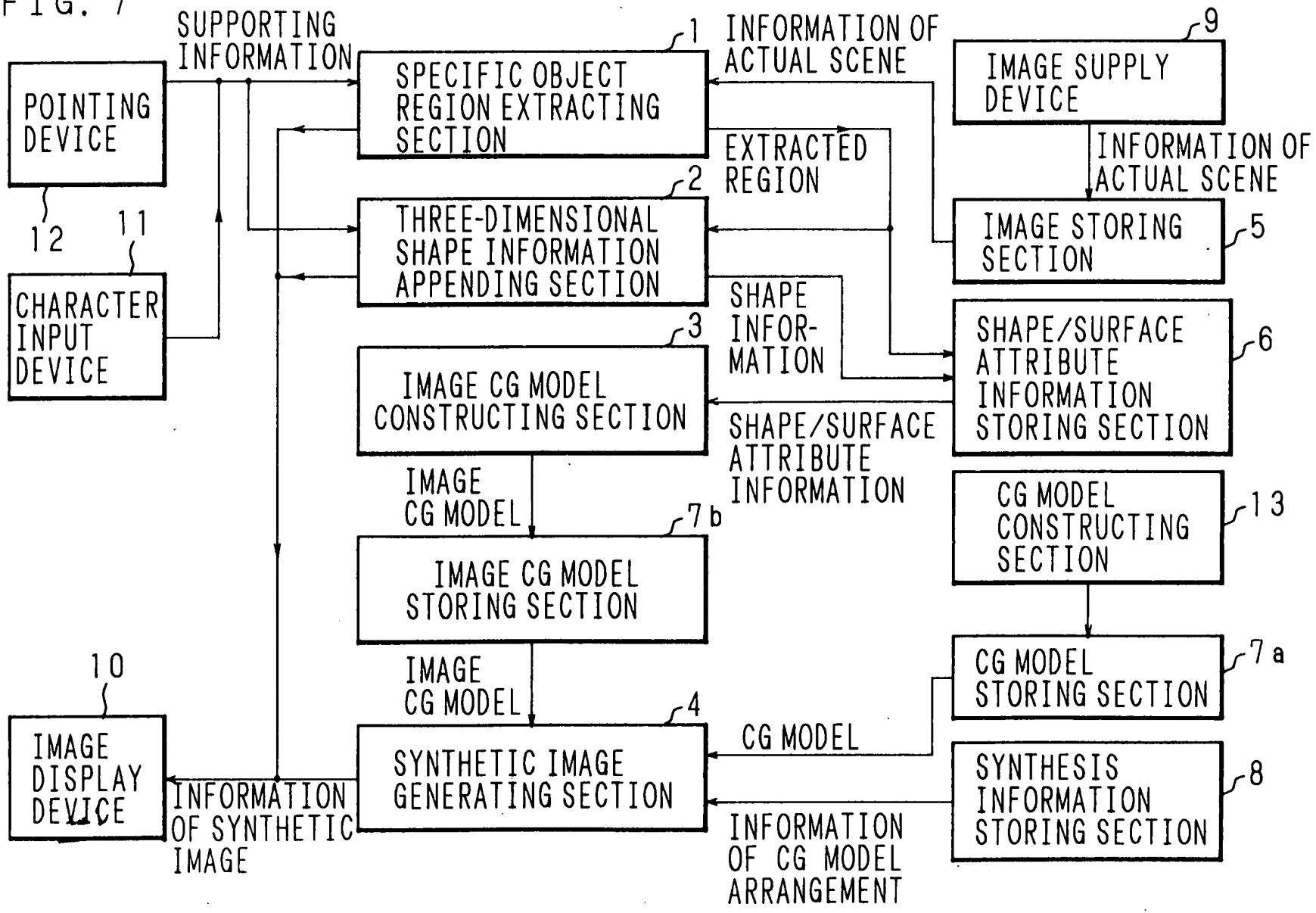
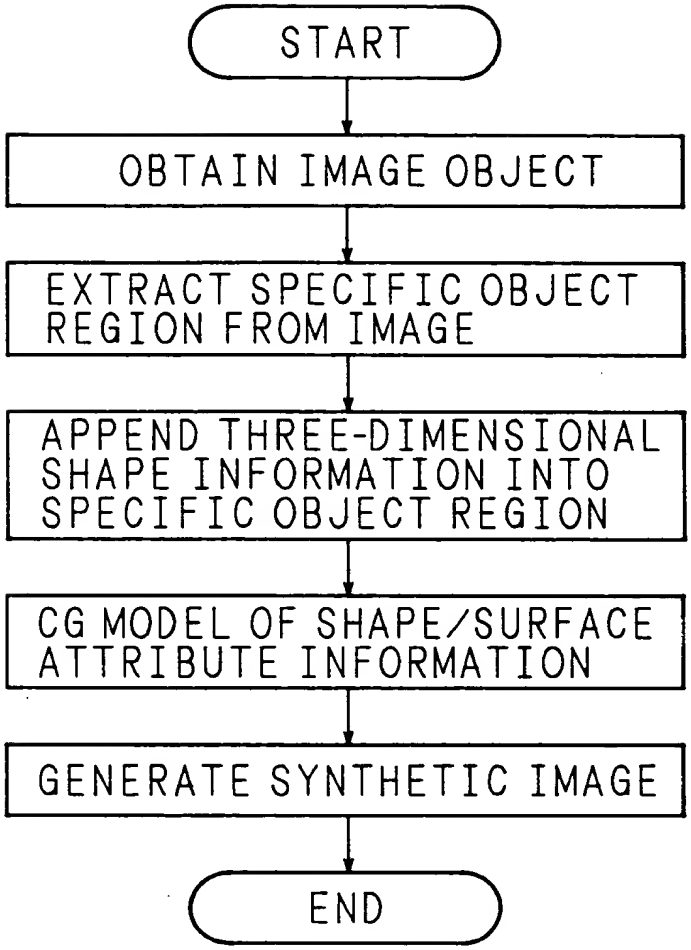
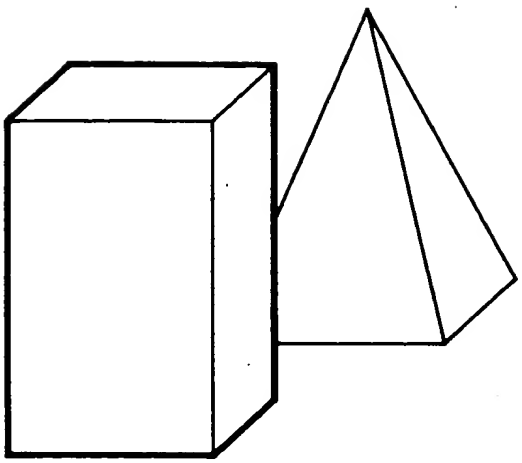

SUPPORTING INFORMATION
POINTING DEVICE
12
11
CHARACTER INPUT DEVICE
1
SPECIFIC OBJECT REGION EXTRACTING SECTION
2
THREE-DIMENSIONAL SHAPE INFORMATION APPENDING SECTION
3
IMAGE CG MODEL CONSTRUCTING SECTION
IMAGE CG MODEL
7b
IMAGE CG MODEL STORING SECTION
IMAGE CG MODEL
4
SYNTHETIC IMAGE GENERATING SECTION
10
IMAGE DISPLAY DEVICE
INFORMATION OF SYNTHETIC IMAGE
INFORMATION OF ACTUAL SCENE
EXTRACTED REGION
SHAPE INFOR-MATION
SHAPE/SURFACE ATTRIBUTE INFORMATION
9
IMAGE SUPPLY DEVICE
INFORMATION OF ACTUAL SCENE
IMAGE STORING SECTION
5
SHAPE/SURFACE ATTRIBUTE INFORMATION STORING SECTION
6
CG MODEL CONSTRUCTING SECTION
13
CG MODEL STORING SECTION
7a
CG MODEL
SYNTHESIS INFORMATION STORING SECTION
8
INFORMATION OF CG MODEL ARRANGEMENT

FIG. 8



JP2004-145832

FIG. 9



US 6,845,498 B2

FIG. 10

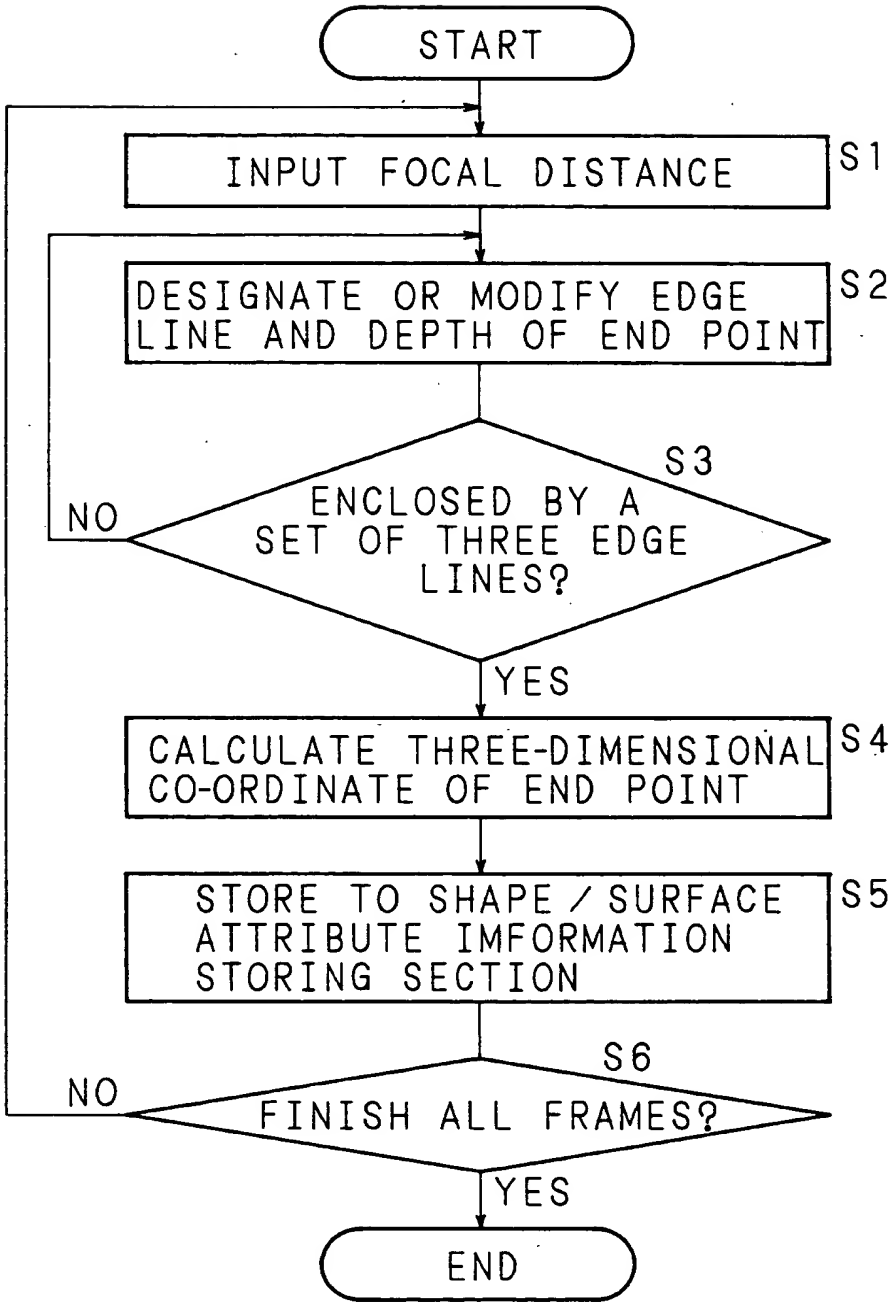
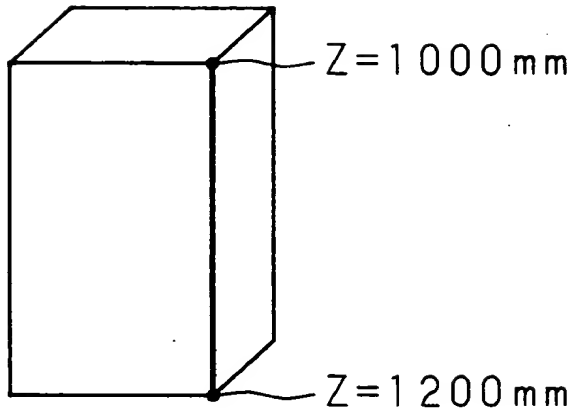
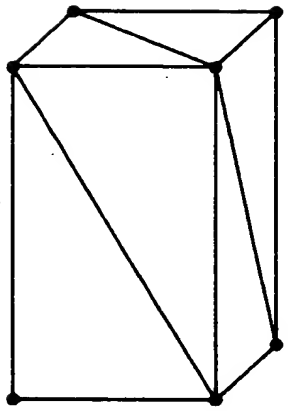

START
INPUT FOCAL DISTANCE
S1
DESIGNATE OR MODIFY EDGE LINE AND DEPTH OF END POINT
S2
S3
ENCLOSED BY A SET OF THREE EDGE LINES?
NO
YES
CALCULATE THREE-DIMENSIONAL CO-ORDINATE OF END POINT
S4
STORE TO SHAPE / SURFACE ATTRIBUTE IMFORMATION STORING SECTION
S5
S6
FINISH ALL FRAMES?
NO
YES
END

FIG. 11



US Patent Application Publication Dec. 9, 2004 Sheet 11 of 13 US 2004/0245888 A1

FIG. 12



US 6,498,595 B1

FIG. 13

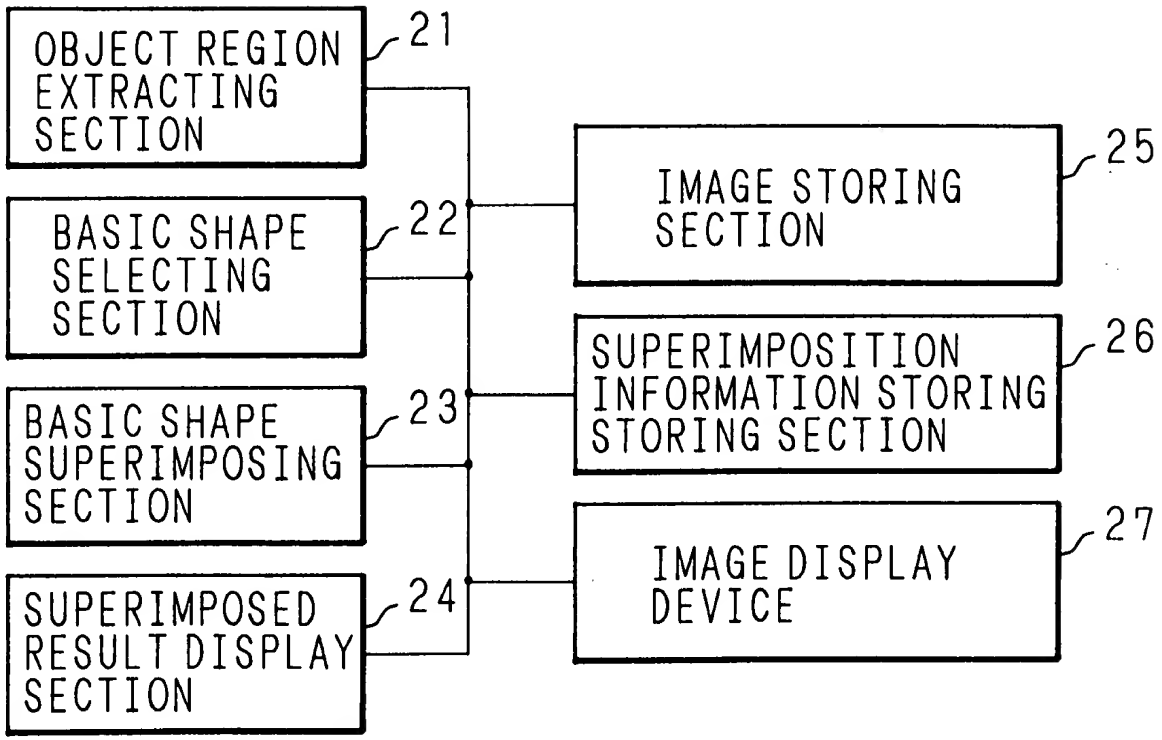

OBJECT REGION EXTRACTING SECTION
21
BASIC SHAPE SELECTING SECTION
22
BASIC SHAPE SUPERIMPOSING SECTION
23
SUPERIMPOSED RESULT DISPLAY SECTION
24
IMAGE STORING SECTION
25
SUPERIMPOSITION INFORMATION STORING STORING SECTION
26
IMAGE DISPLAY DEVICE
27

FIG. 14

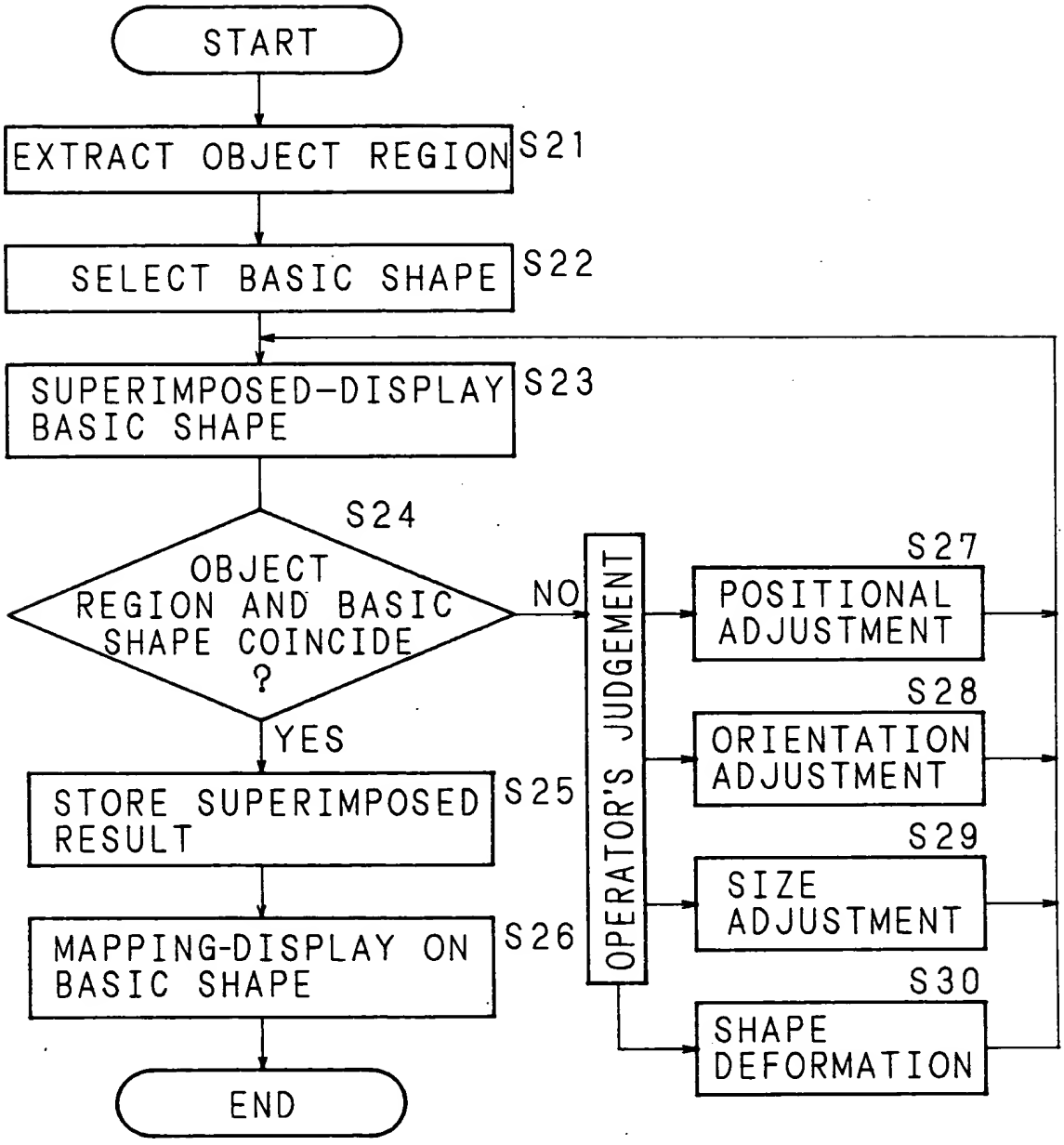
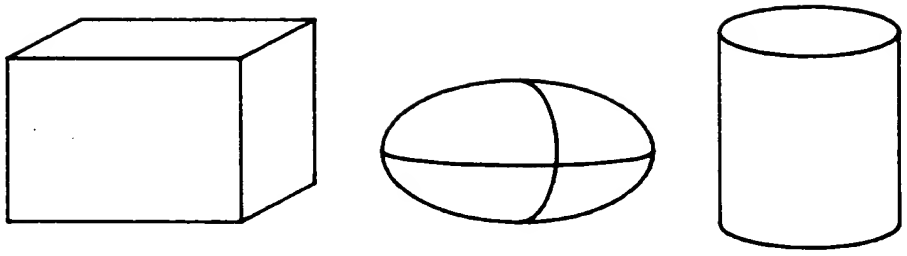

START
EXTRACT OBJECT REGION
S21
SELECT BASIC SHAPE
S22
SUPERIMPOSED-DISPLAY BASIC SHAPE
S23
S24
OBJECT REGION AND BASIC SHAPE COINCIDE ?
NO
YES
OPERATOR'S JUDGEMENT
S27
POSITIONAL ADJUSTMENT
S28
ORIENTATION ADJUSTMENT
S29
SIZE ADJUSTMENT
S30
SHAPE DEFORMATION
STORE SUPERIMPOSED RESULT
S25
MAPPING-DISPLAY ON BASIC SHAPE
S26
END

FIG. 15



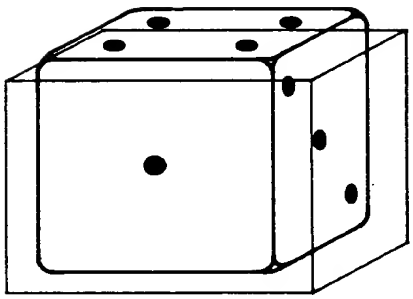
RECTANGULAR PARALLELEPIPED

ELLIPSE

COLUMN

EP 0 886 154 A2

FIG. 16



Sep 02 2005 15:09 FR

FIG. 17A

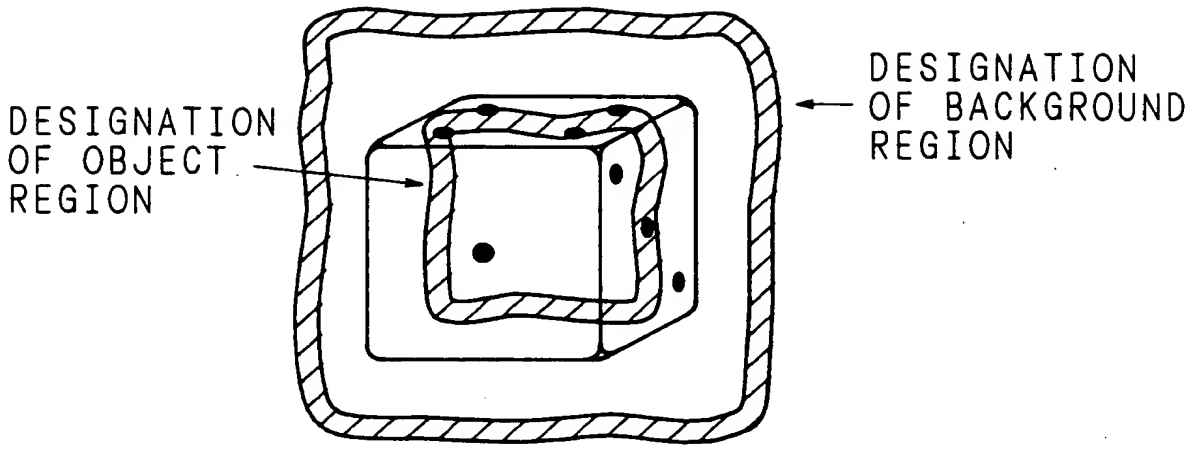


FIG. 17B

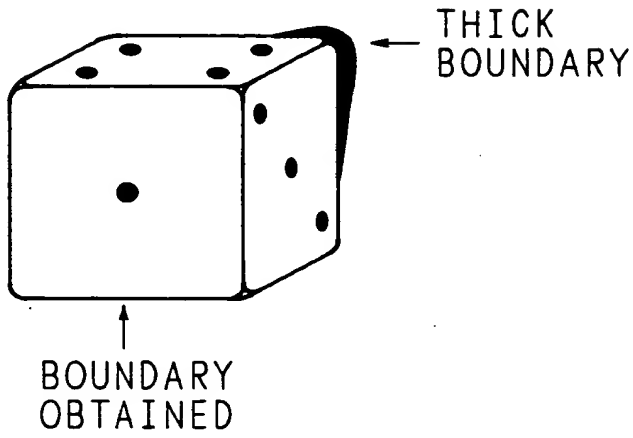


FIG. 18

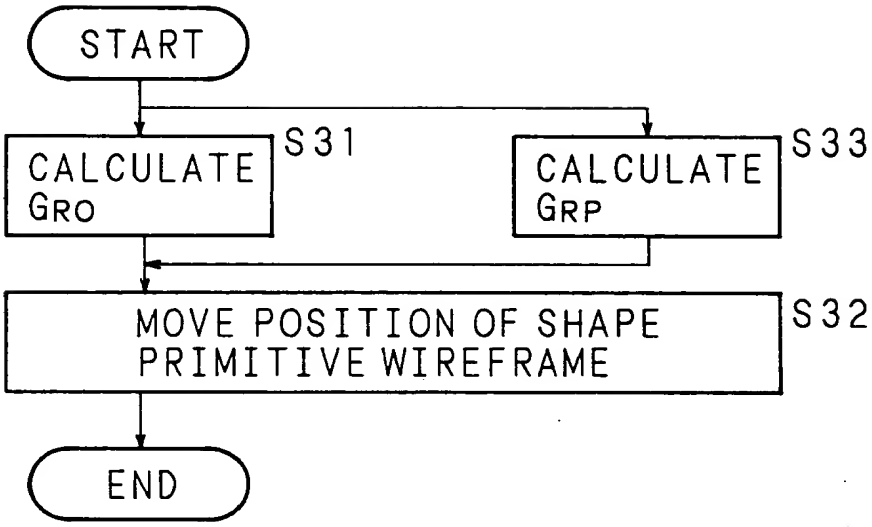

START
CALCULATE GRO
S31
CALCULATE GRP
S33
MOVE POSITION OF SHAPE PRIMITIVE WIREFRAME
S32
END

FIG. 19A

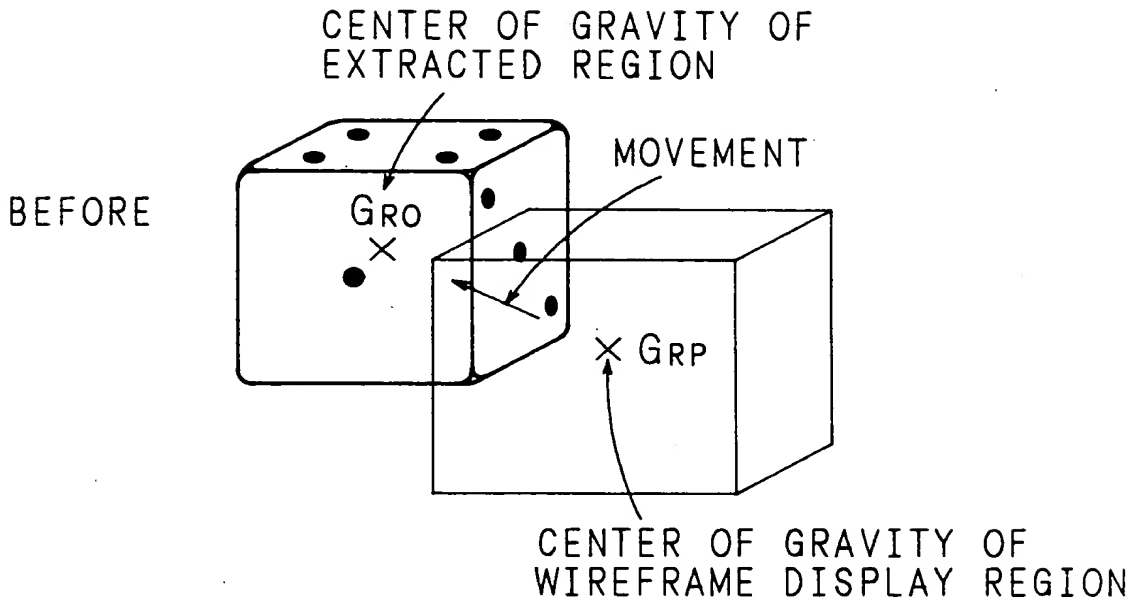
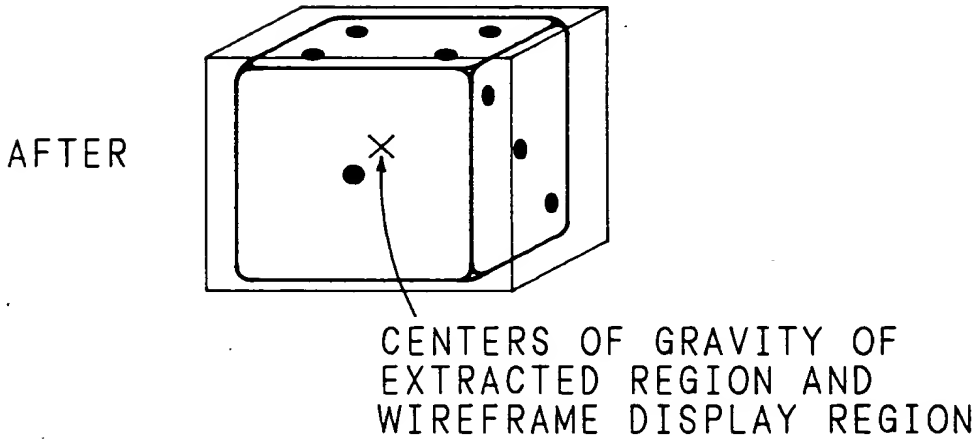
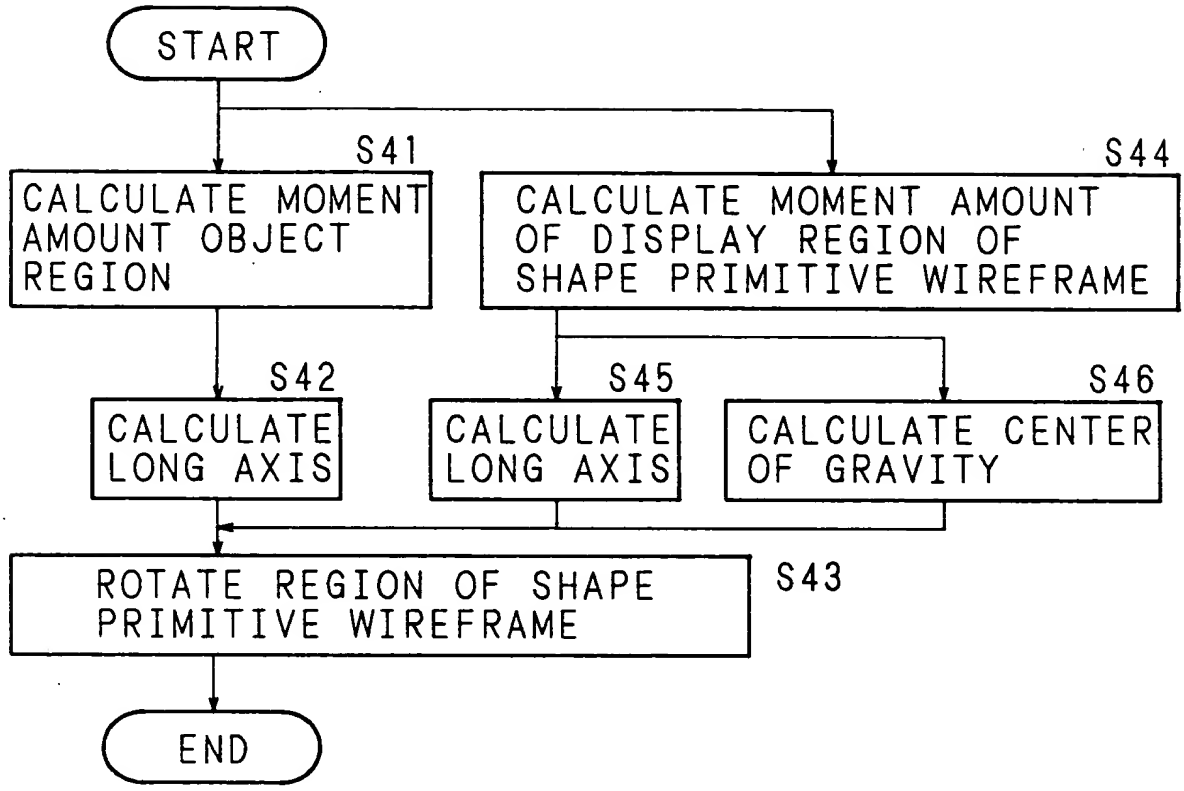


FIG. 19B



JP2002-163668A

FIG. 20



JP2004-164480

FIG. 21A

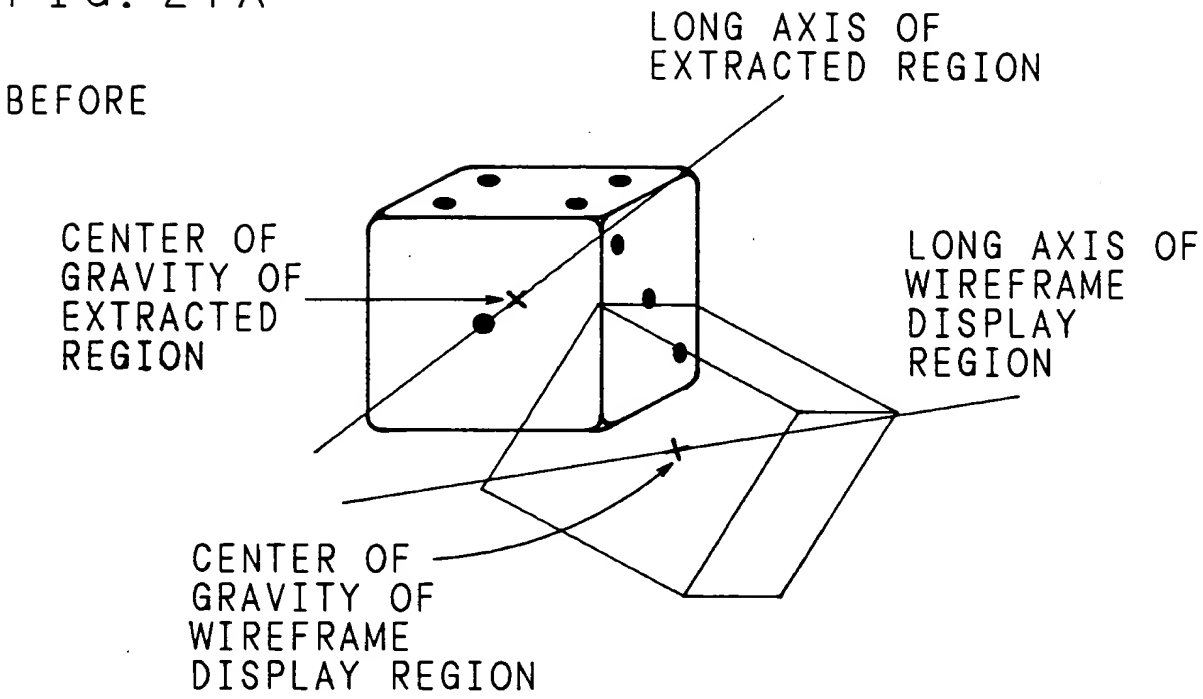
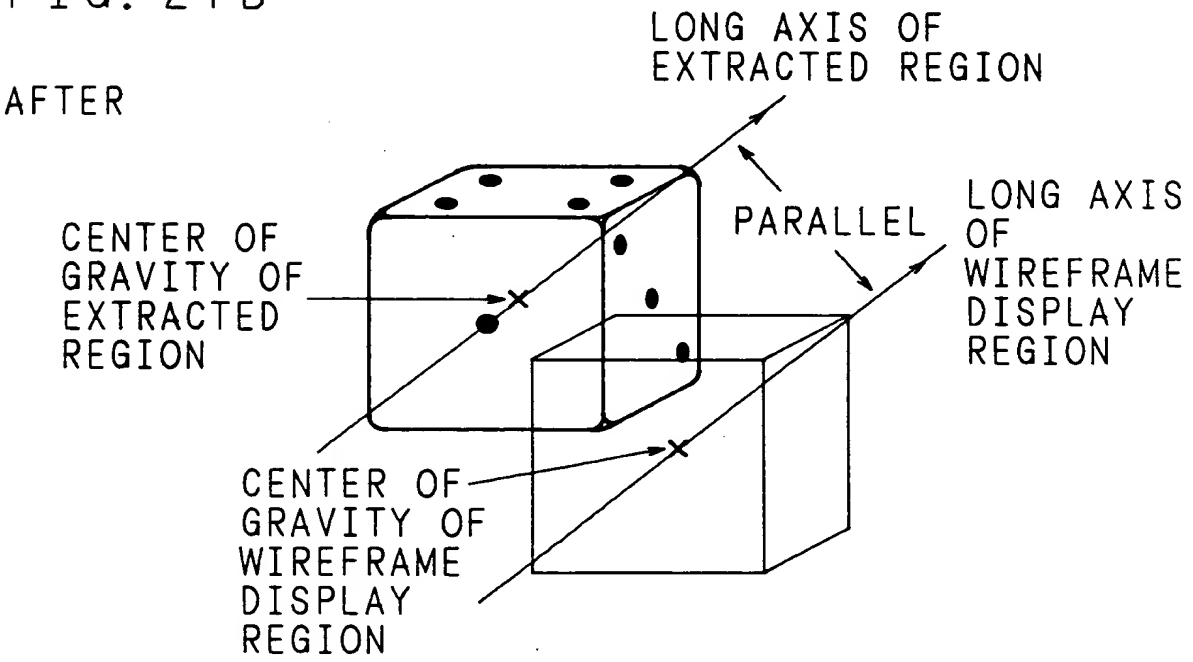


FIG. 21B



JP03-219895

FIG. 22

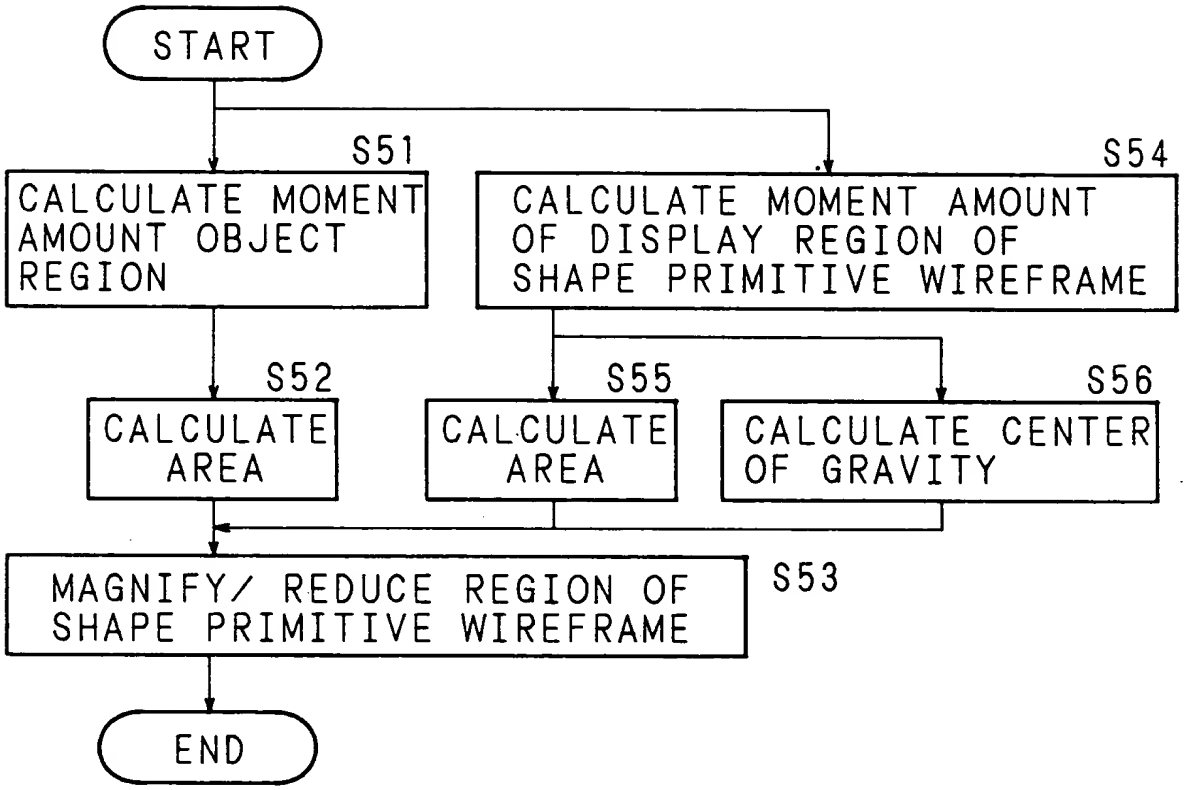
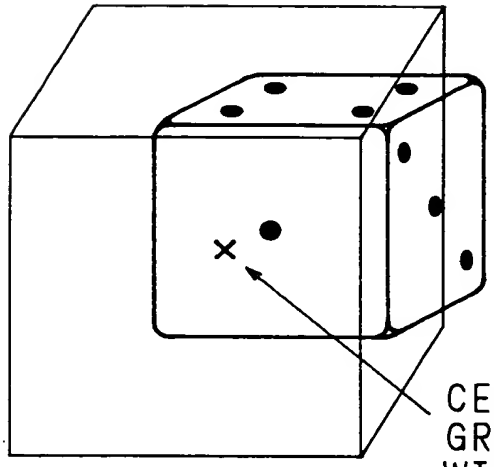

START
S51
CALCULATE MOMENT AMOUNT OBJECT REGION
S54
CALCULATE MOMENT AMOUNT OF DISPLAY REGION OF SHAPE PRIMITIVE WIREFRAME
S52
CALCULATE AREA
S55
CALCULATE AREA
S56
CALCULATE CENTER OF GRAVITY
MAGNIFY/ REDUCE REGION OF SHAPE PRIMITIVE WIREFRAME
S53
END

FIG. 23A

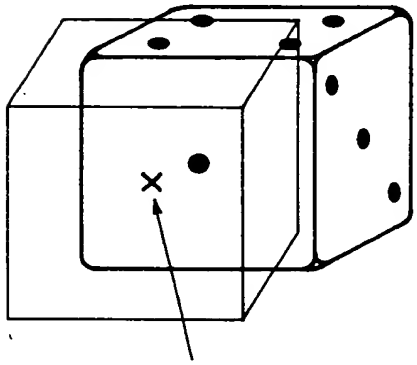
BEFORE



CENTER OF GRAVITY OF WIREFRAME DISPLAY REGION

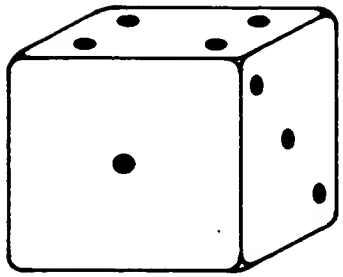
FIG. 23B

AFTER



CENTER OF GRAVITY OF WIREFRAME DISPLAY REGION

FIG. 24



0050450 : 9105 0S3

FIG. 25

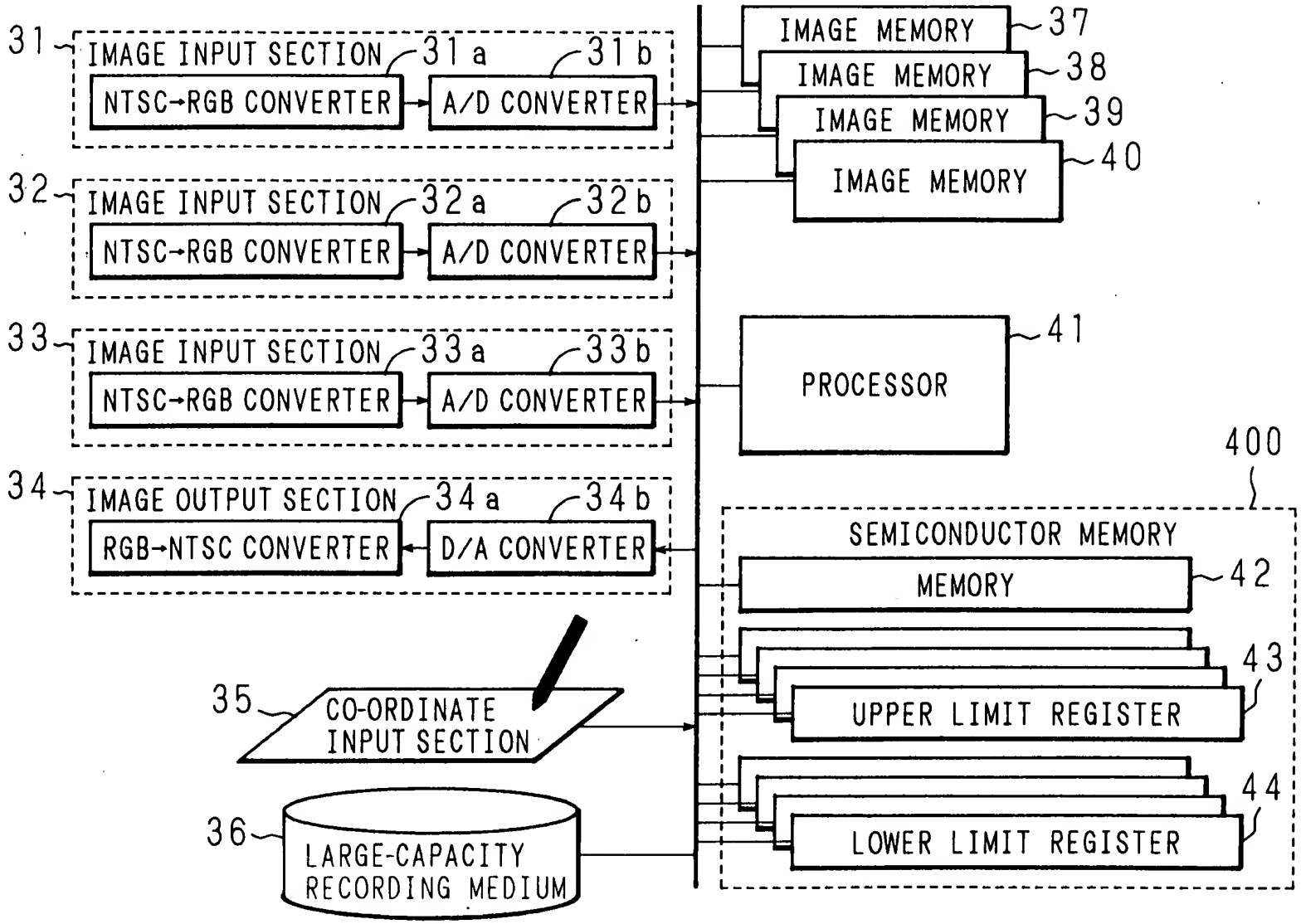
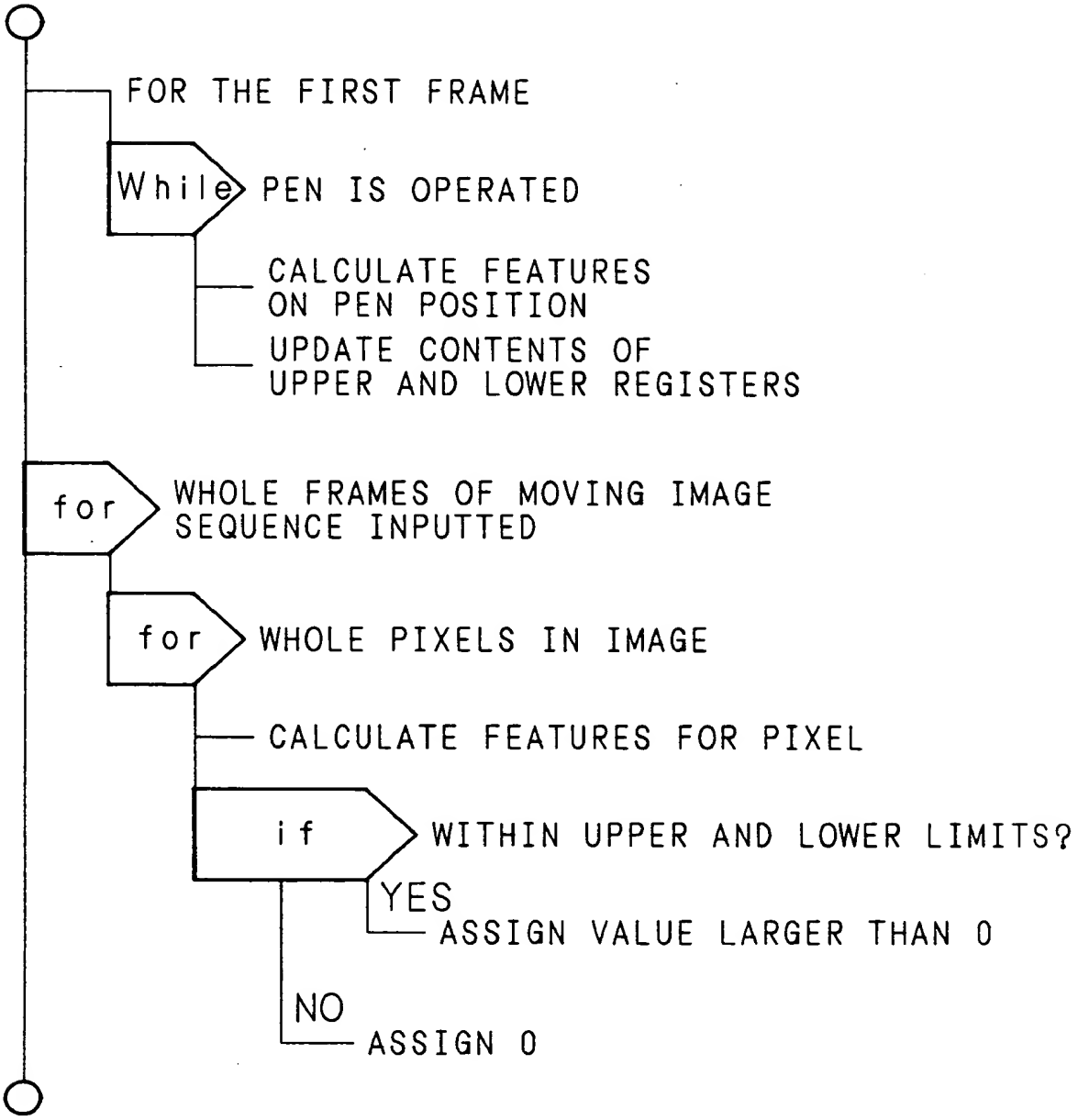

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
400
SEMICONDUCTOR MEMORY
MEMORY
42
43
UPPER LIMIT REGISTER
44
LOWER LIMIT REGISTER

FIG. 26



Document: EP0805434

FIG. 27A

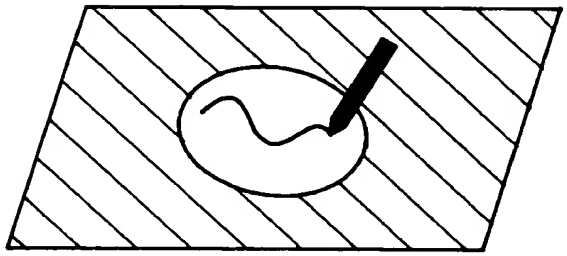
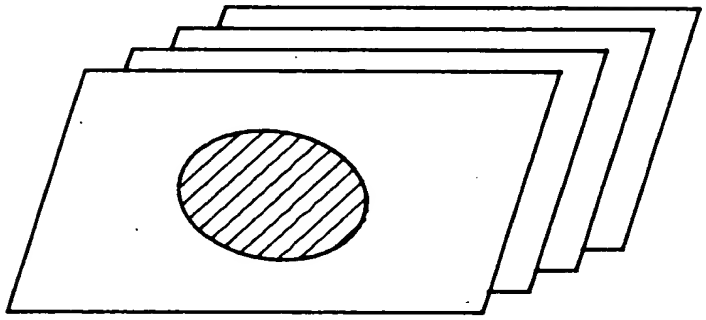


FIG. 27B



6,969,349 Nov. 29, 2005

FIG. 28

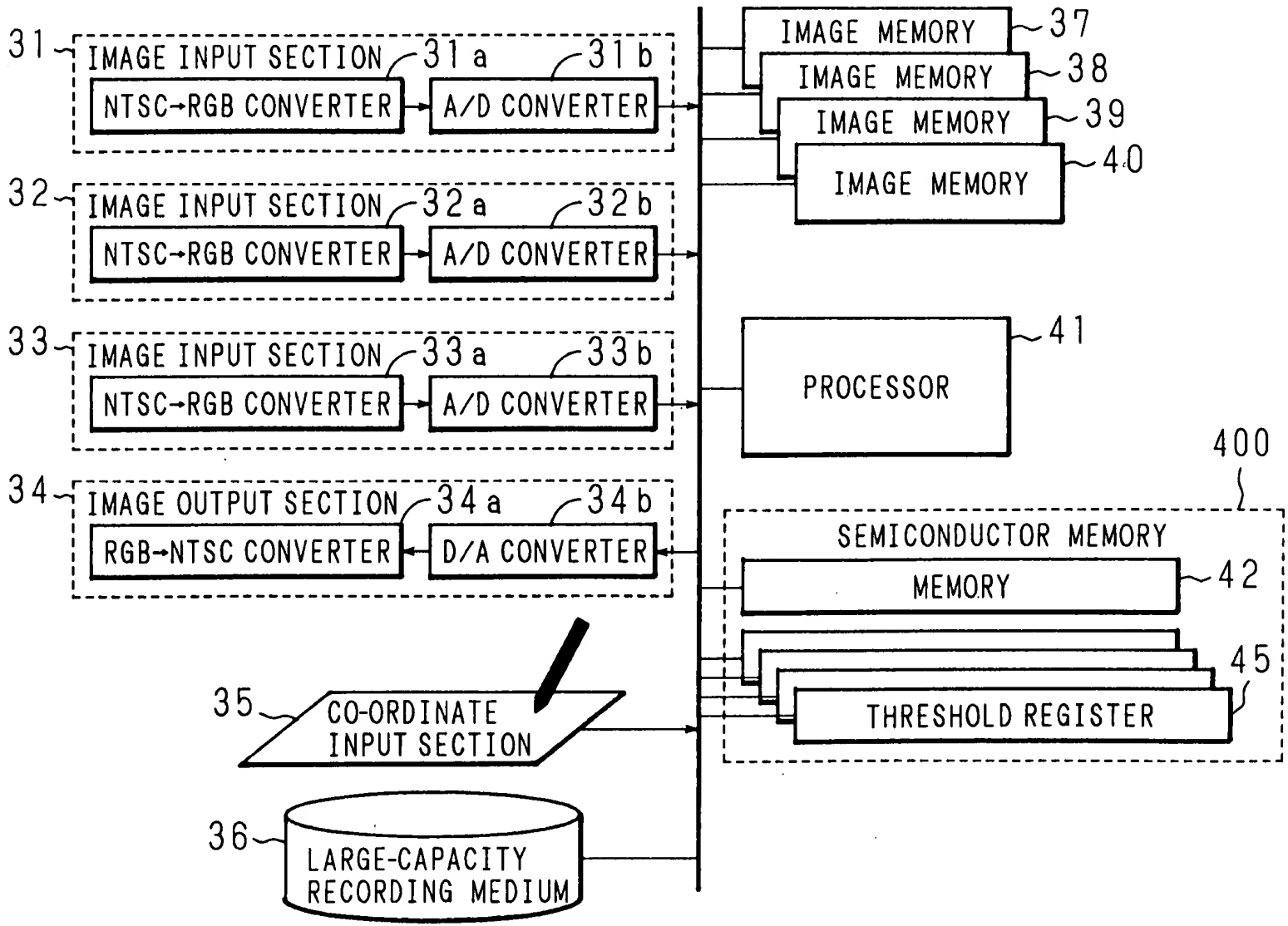

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
400
SEMICONDUCTOR MEMORY
MEMORY
42
45
THRESHOLD REGISTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM

FIG. 29

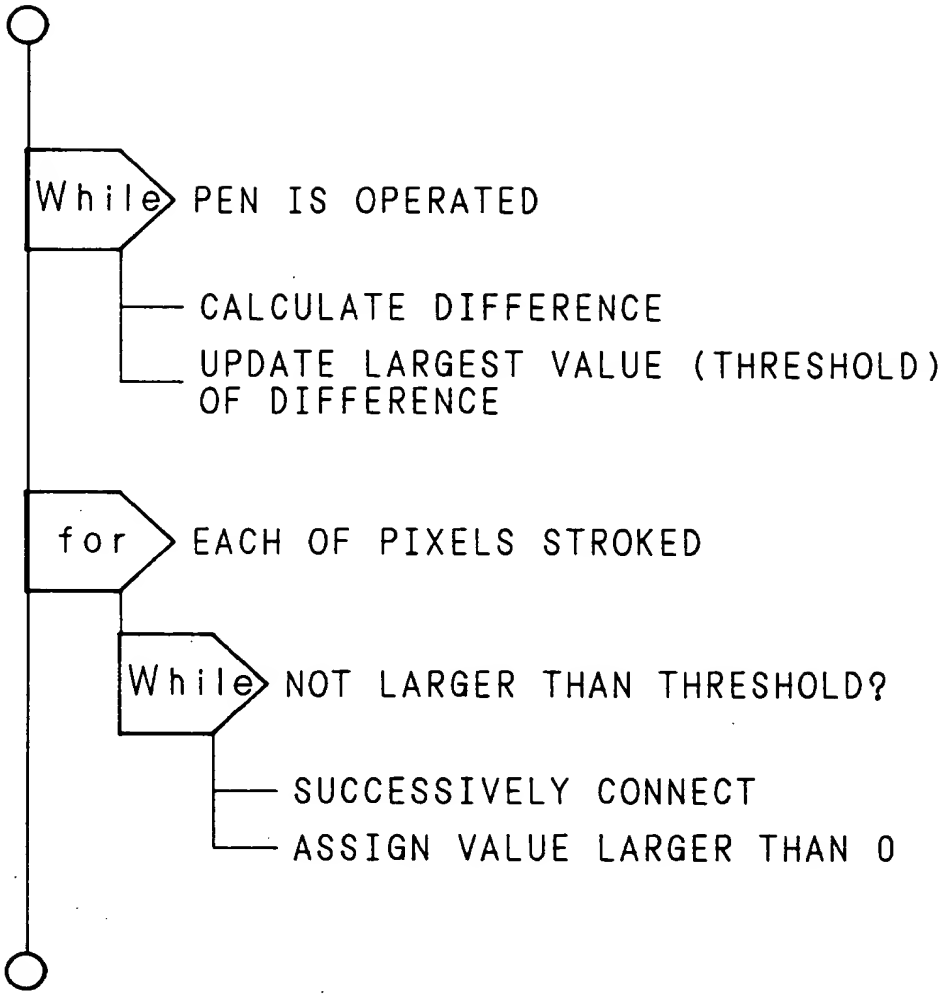
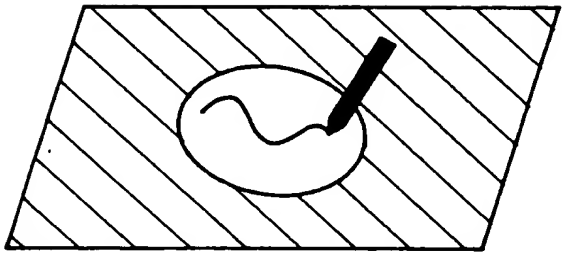

While PEN IS OPERATED
CALCULATE DIFFERENCE
UPDATE LARGEST VALUE (THRESHOLD) OF DIFFERENCE
for EACH OF PIXELS STROKED
While NOT LARGER THAN THRESHOLD?
SUCCESSIVELY CONNECT
ASSIGN VALUE LARGER THAN 0

FIG. 30A



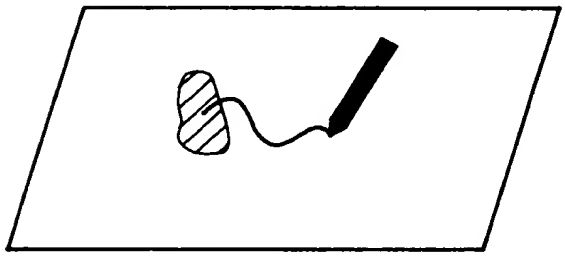


FIG. 30B

US 6,894,686 B2

FIG. 31

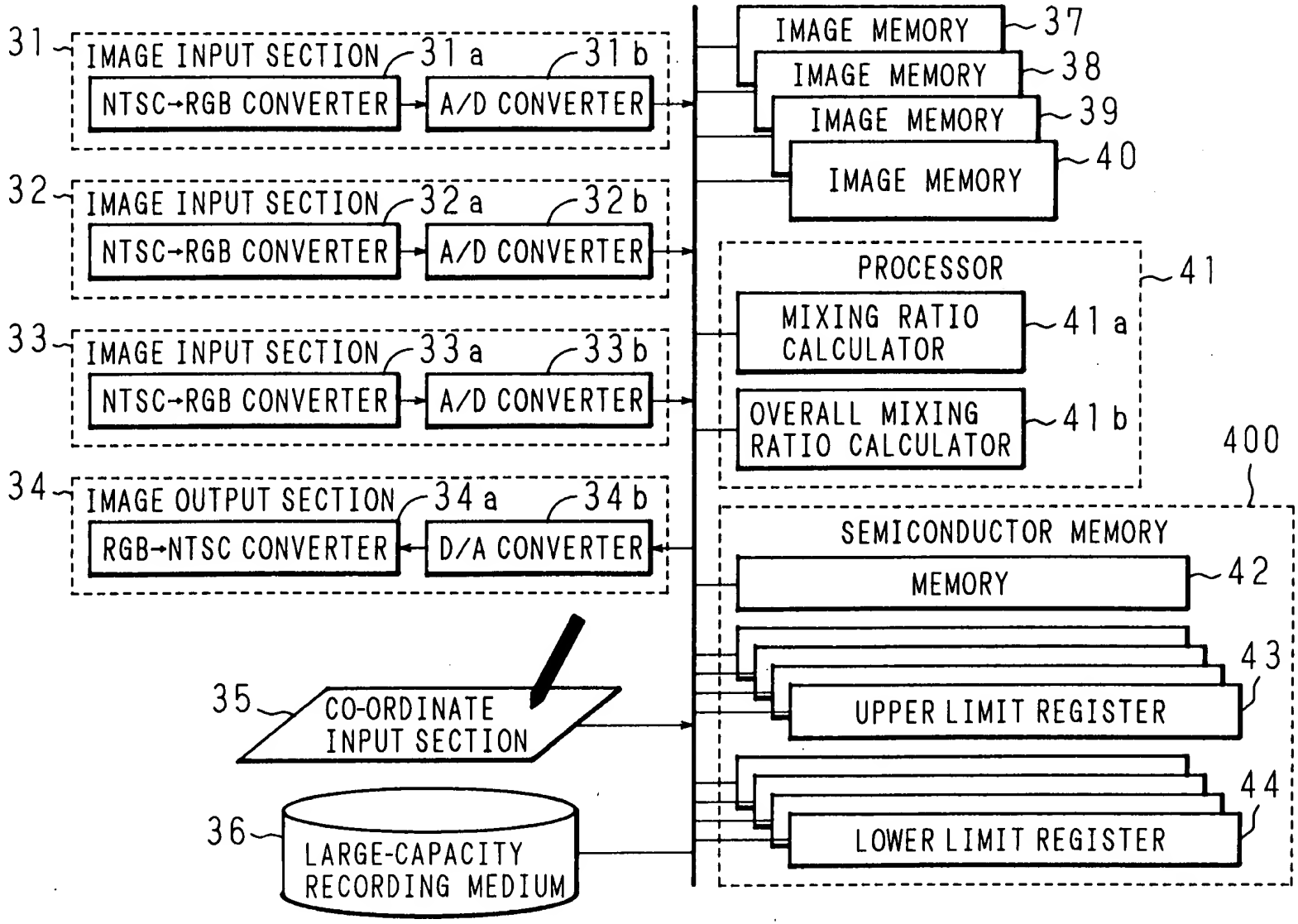
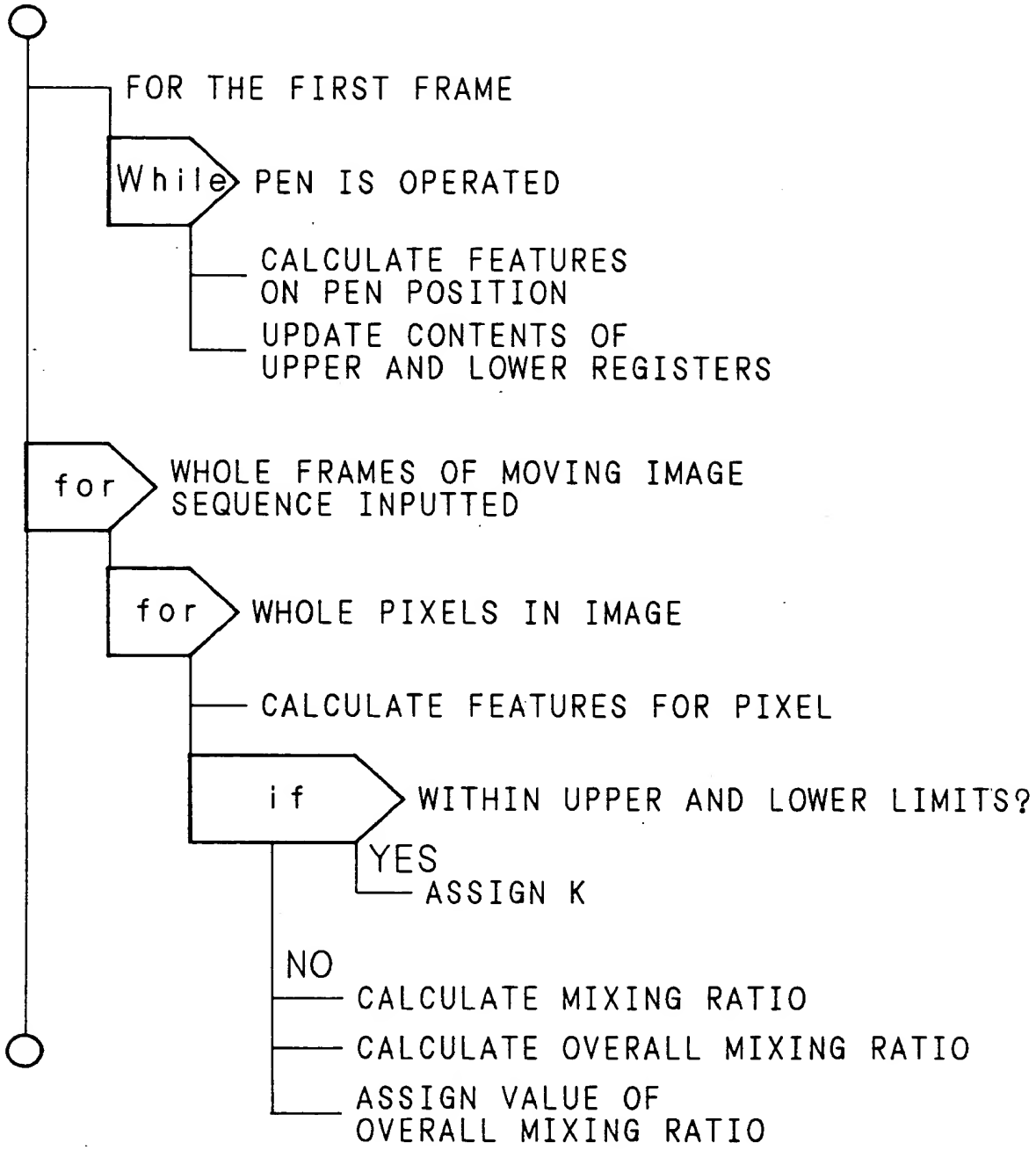

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
MIXING RATIO CALCULATOR
41a
OVERALL MIXING RATIO CALCULATOR
41b
400
SEMICONDUCTOR MEMORY
MEMORY
42
43
UPPER LIMIT REGISTER
44
LOWER LIMIT REGISTER

FIG. 32



US 6,456,749 B1

FIG. 33A

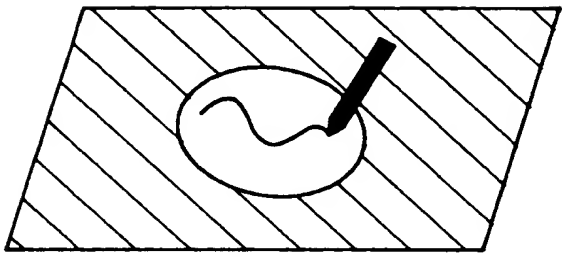
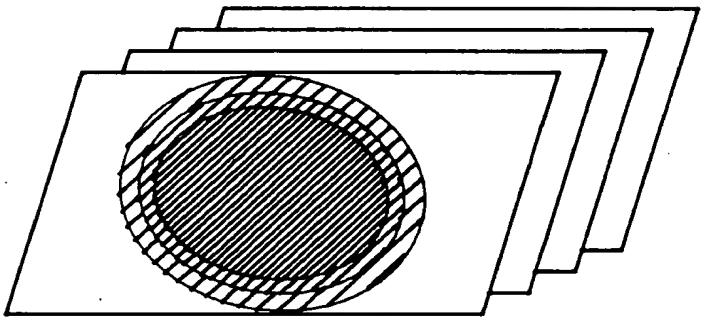


FIG. 33B



0804049-020397

FIG. 34

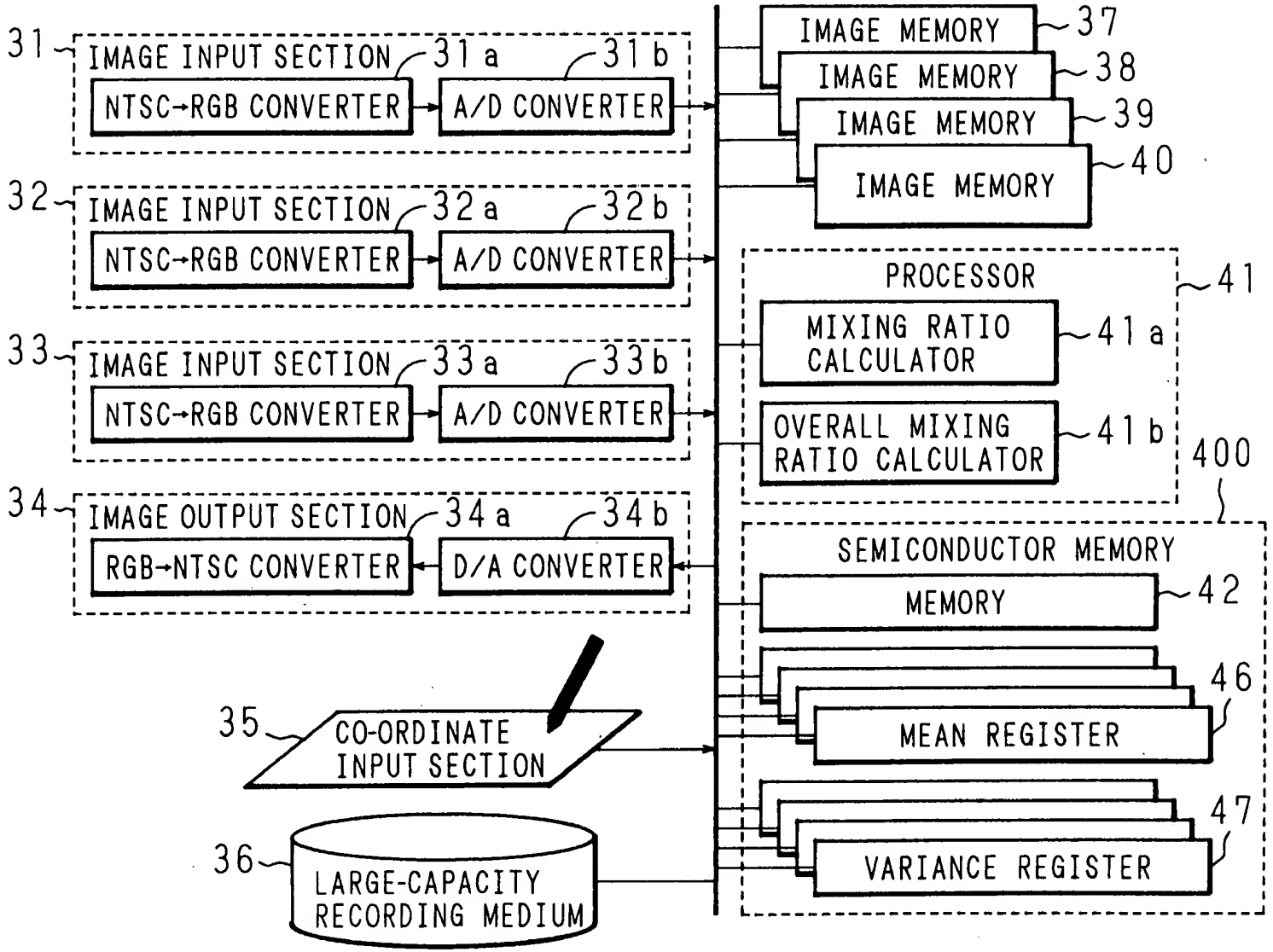
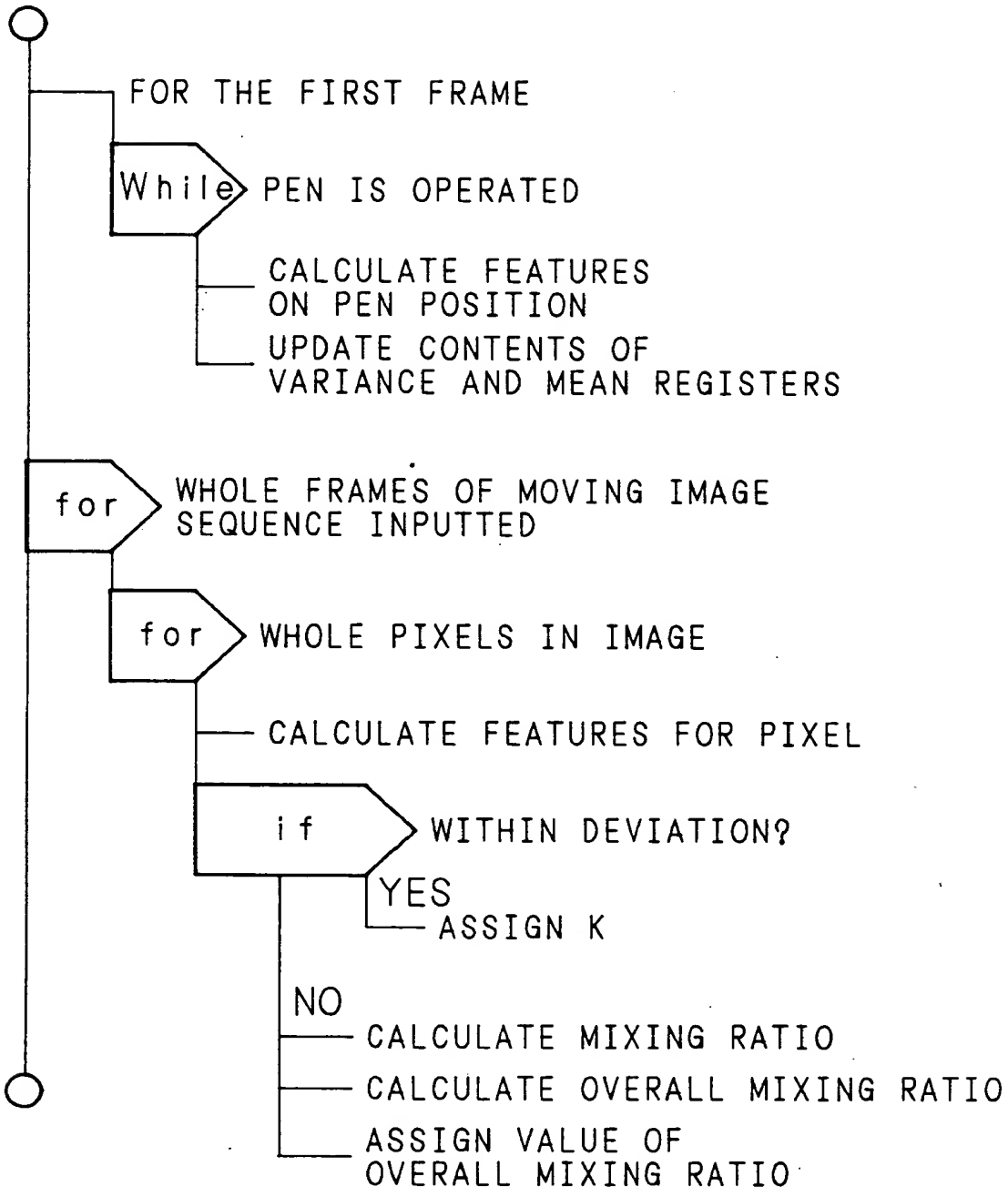

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
MIXING RATIO CALCULATOR
41a
OVERALL MIXING RATIO CALCULATOR
41b
400
SEMICONDUCTOR MEMORY
MEMORY
42
46
MEAN REGISTER
47
VARIANCE REGISTER

FIG. 35



Sheet 35 of 36 U.S. Patent May 9, 1995

FIG. 36A

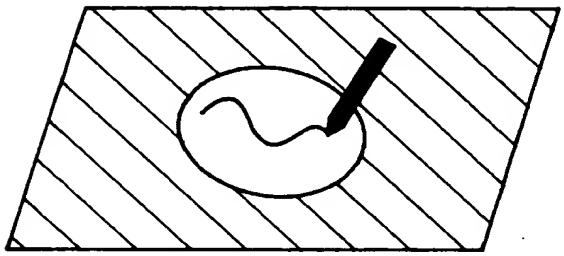
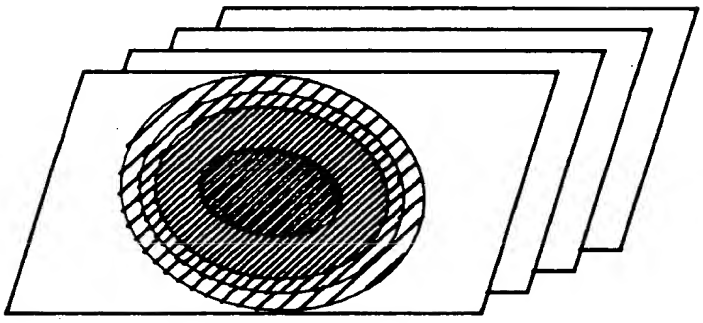


FIG. 36B



5,868,670 - 09 Feb 99

FIG. 37

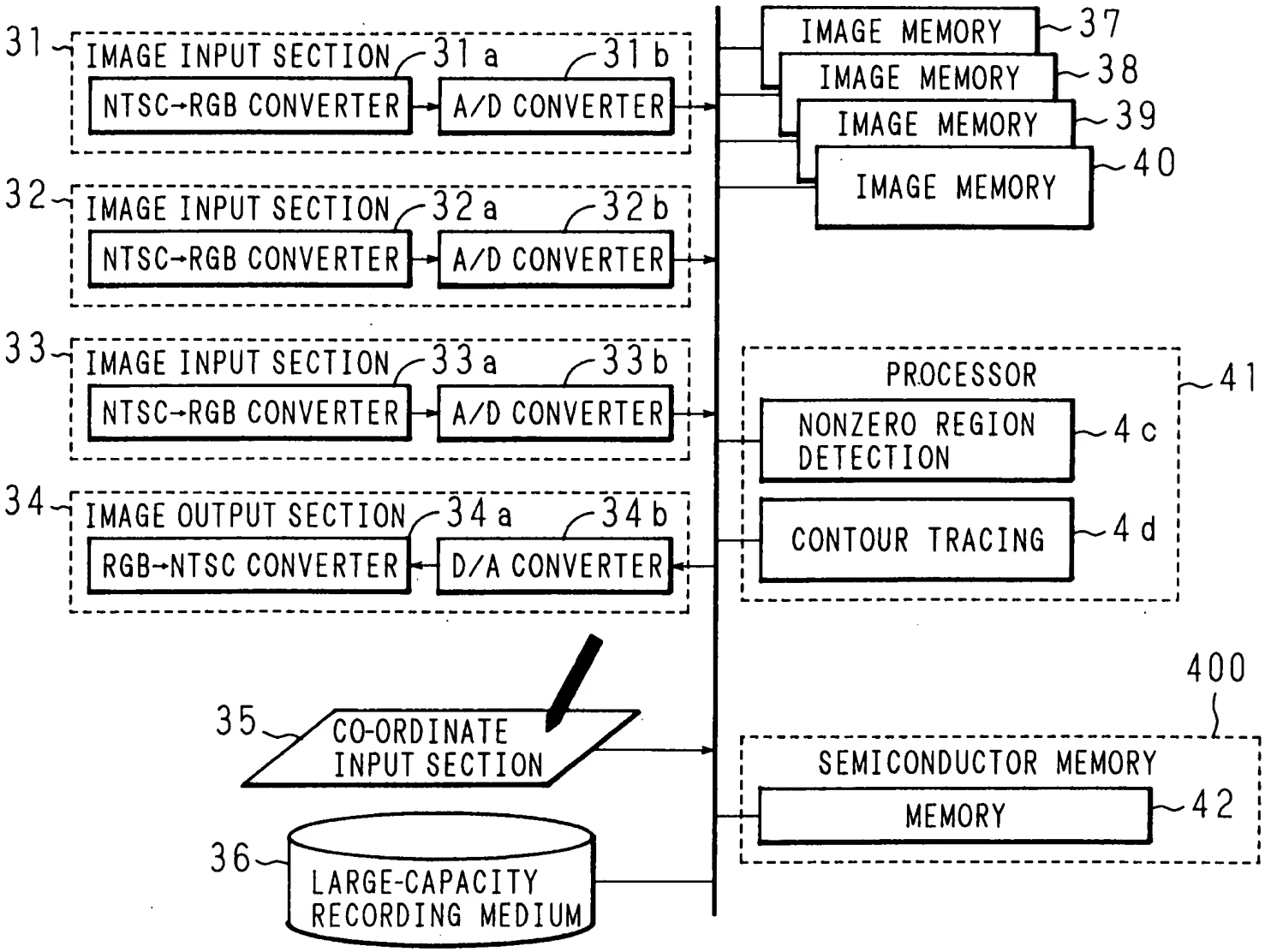
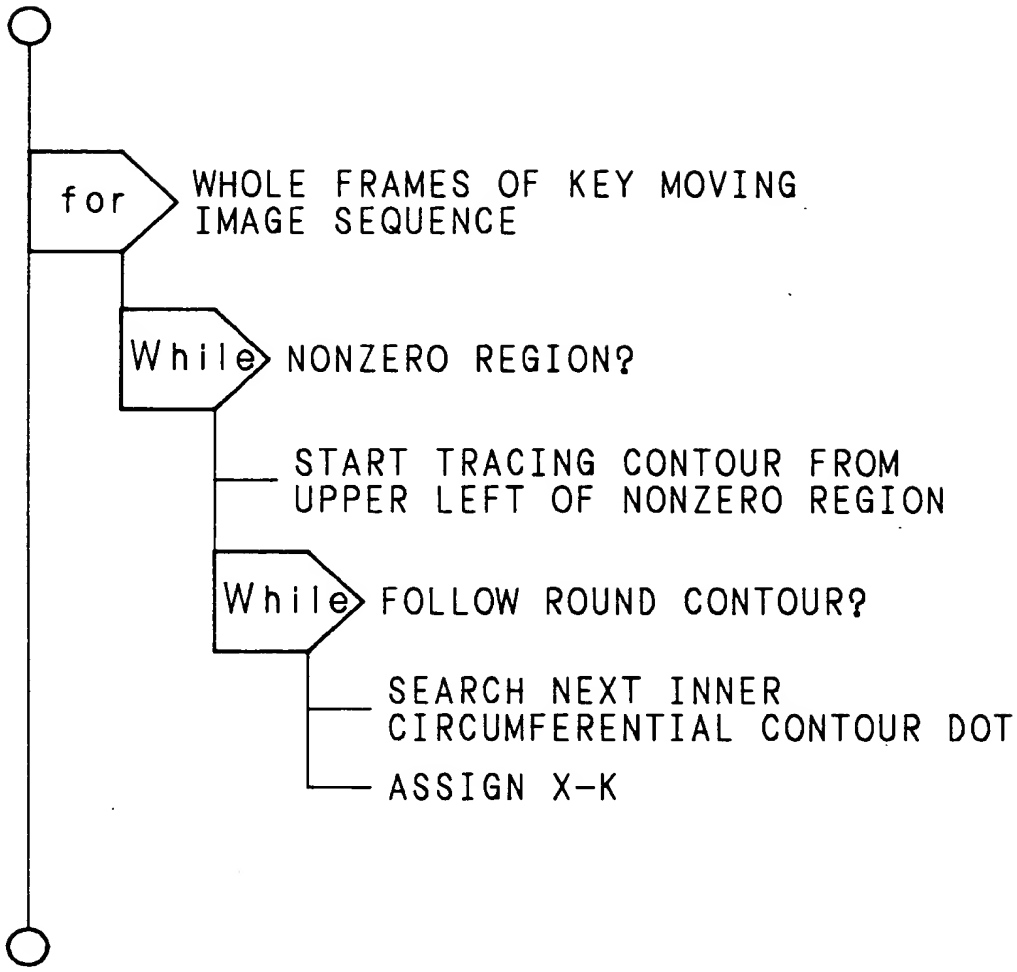
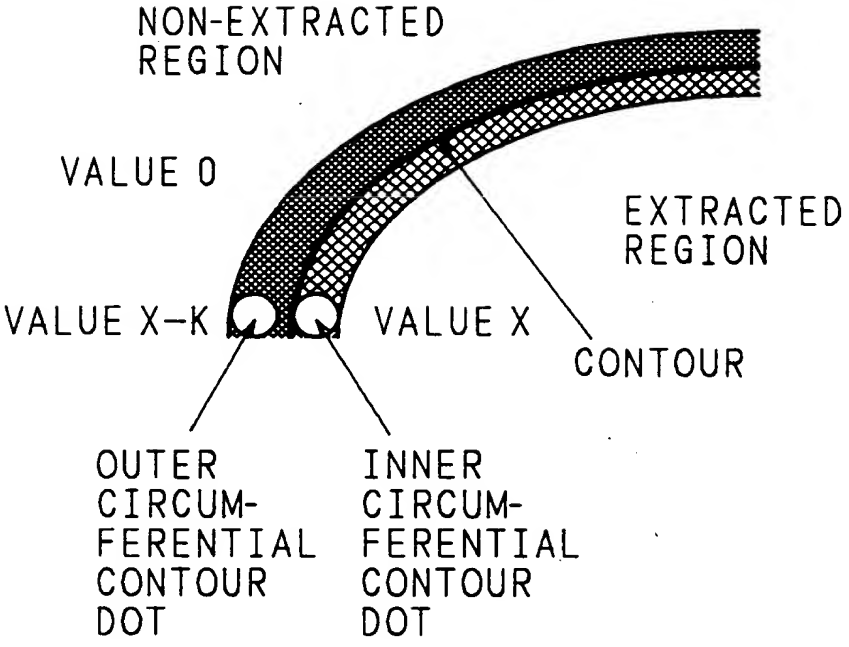

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
NONZERO REGION DETECTION
4c
CONTOUR TRACING
4d
400
SEMICONDUCTOR MEMORY
MEMORY
42

FIG. 38



Vaccaro-5844598

FIG. 39



0098494 '96 02 15

FIG. 40

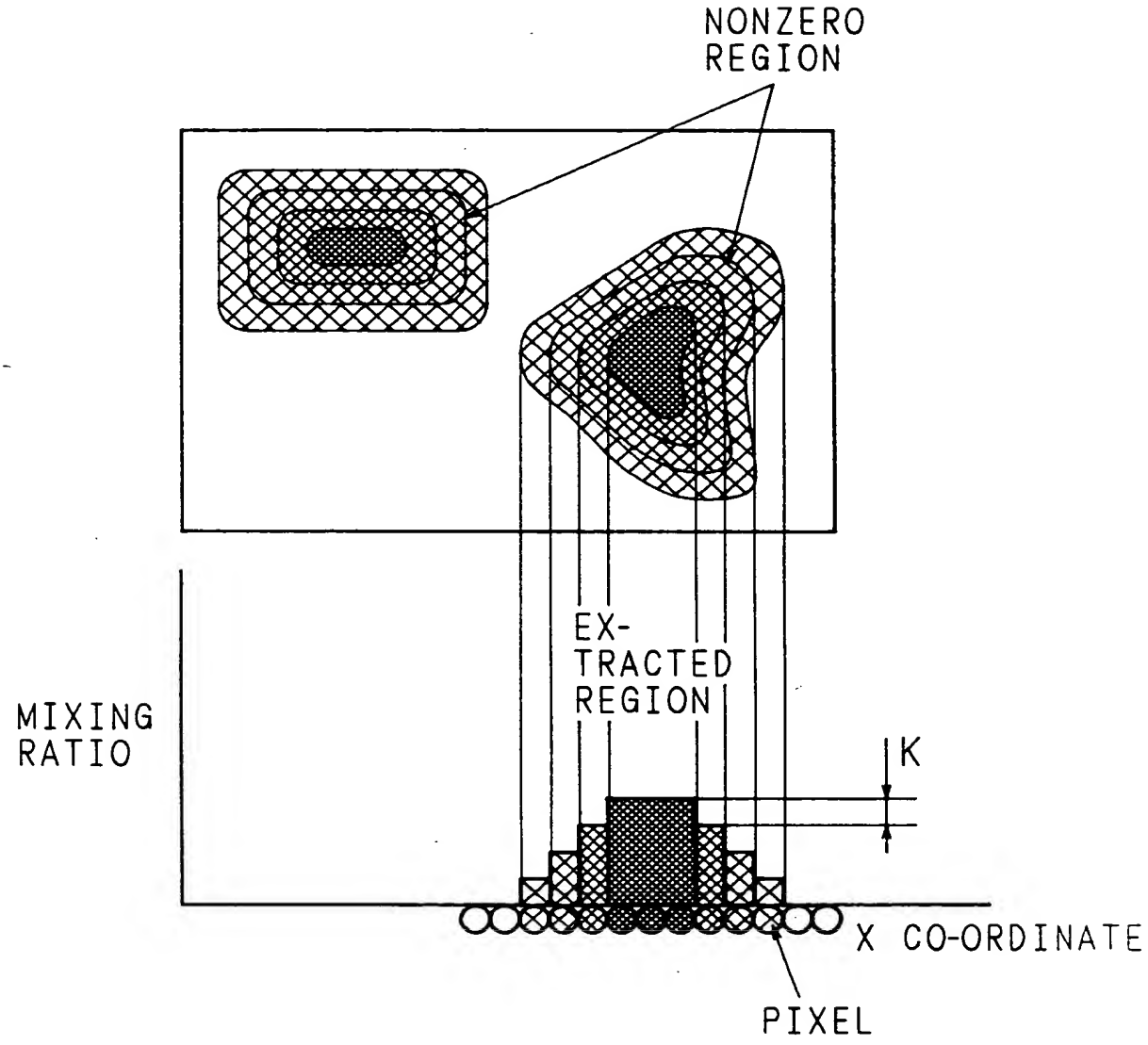

NONZERO
REGION
EX-
TRACTED
REGION
MIXING
RATIO
K
X CO-ORDINATE
PIXEL

FIG. 41

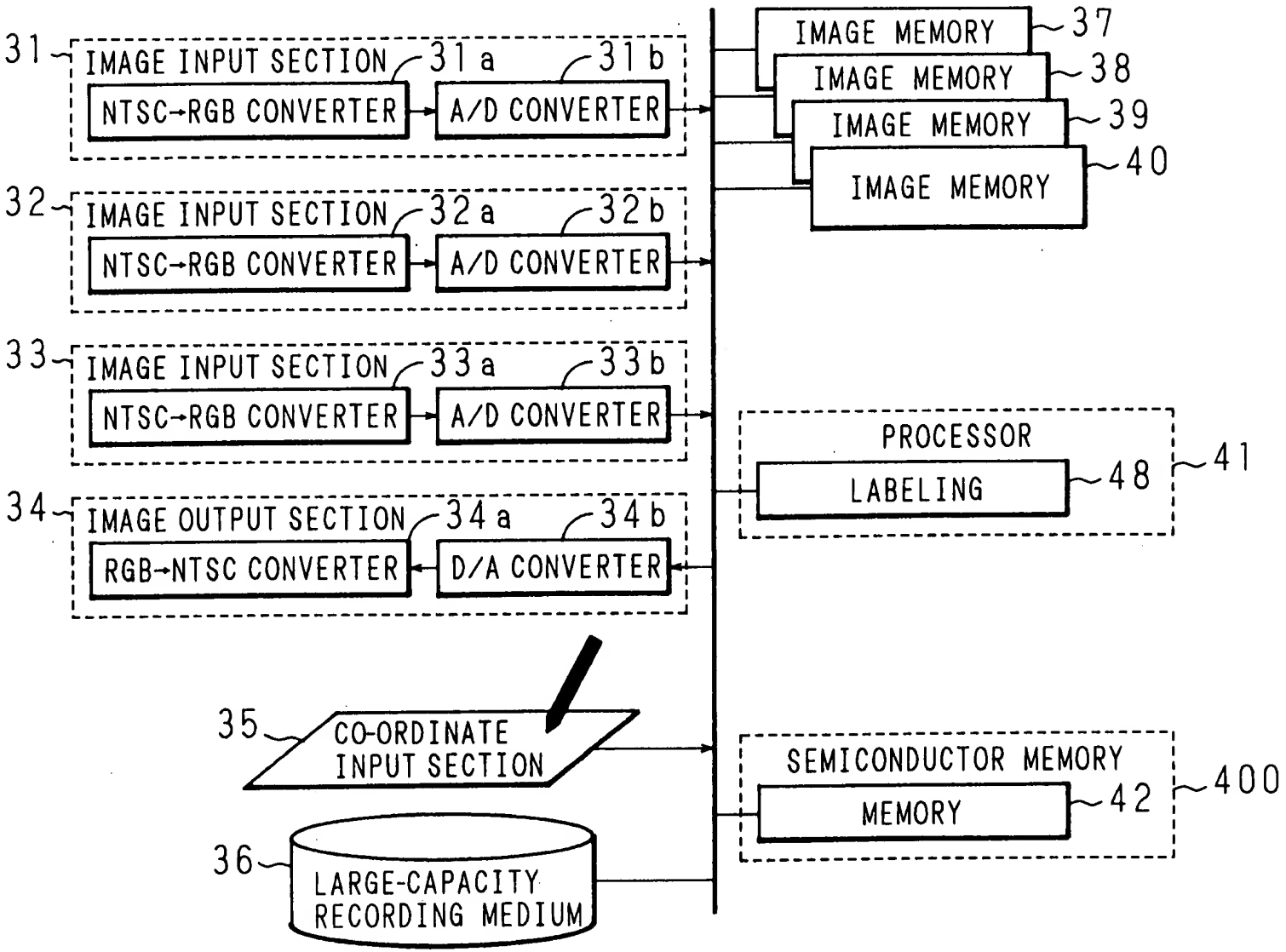

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
LABELING
48
41
SEMICONDUCTOR MEMORY
MEMORY
42
400

FIG. 42

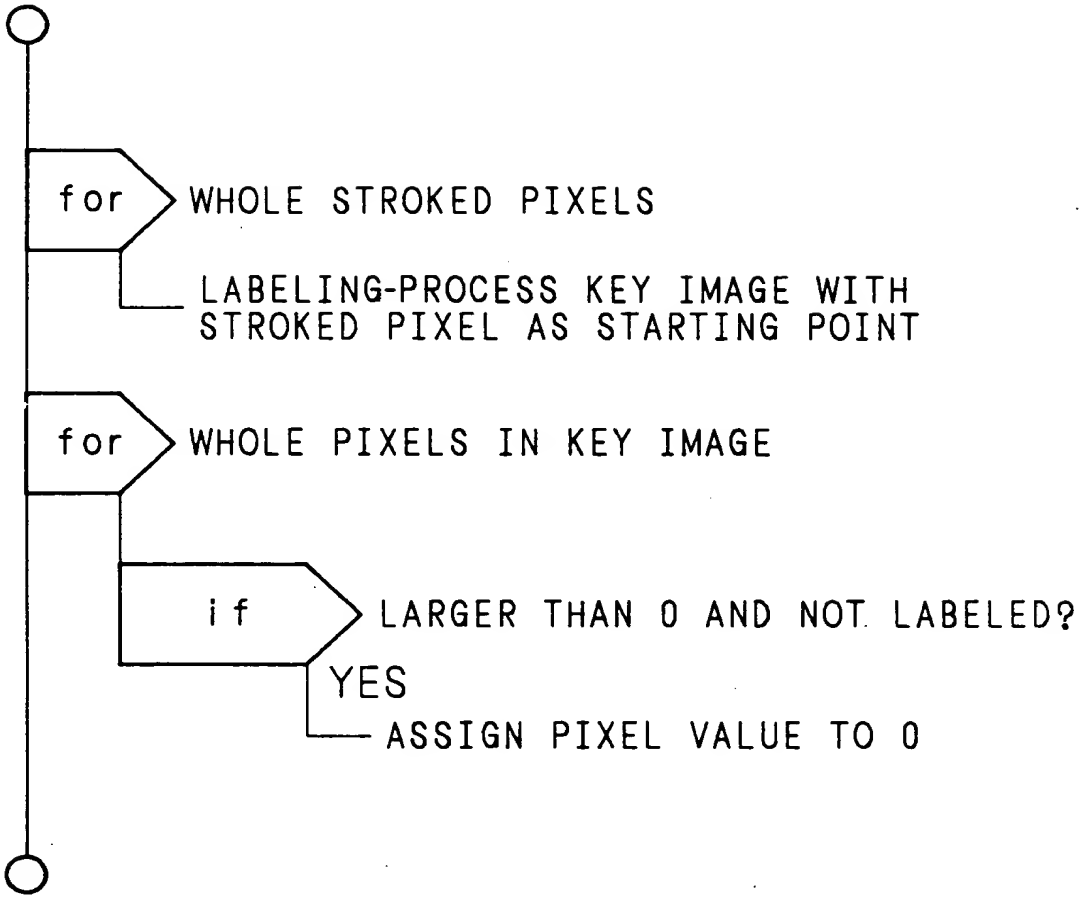

for
WHOLE STROKED PIXELS
LABELING-PROCESS KEY IMAGE WITH STROKED PIXEL AS STARTING POINT
for
WHOLE PIXELS IN KEY IMAGE
if
LARGER THAN 0 AND NOT LABELED?
YES
ASSIGN PIXEL VALUE TO 0

FIG. 43A

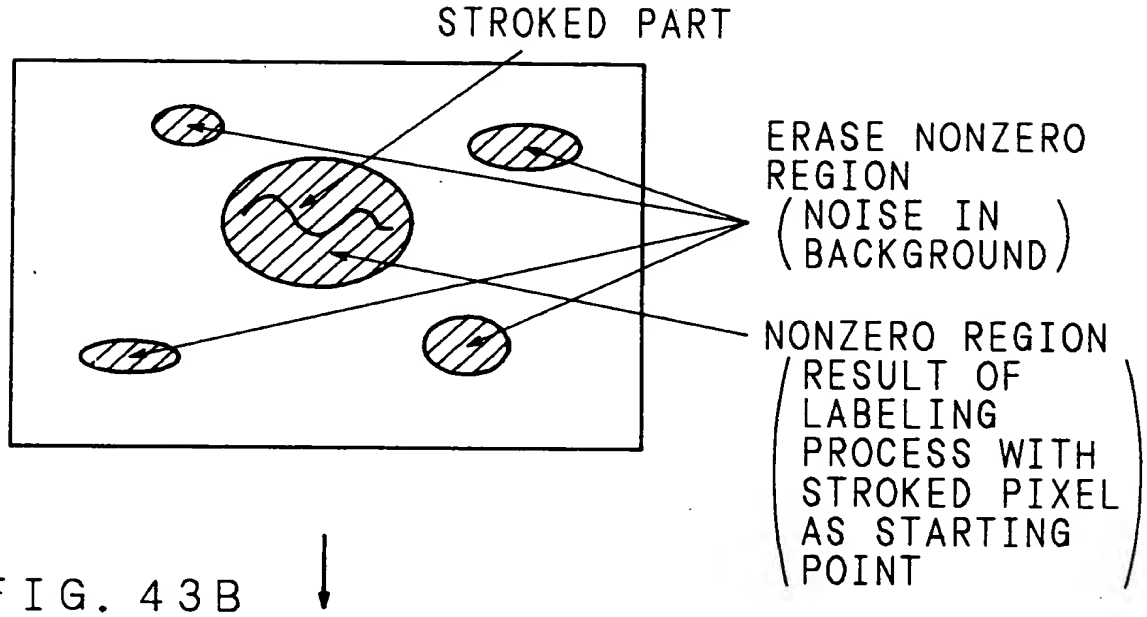
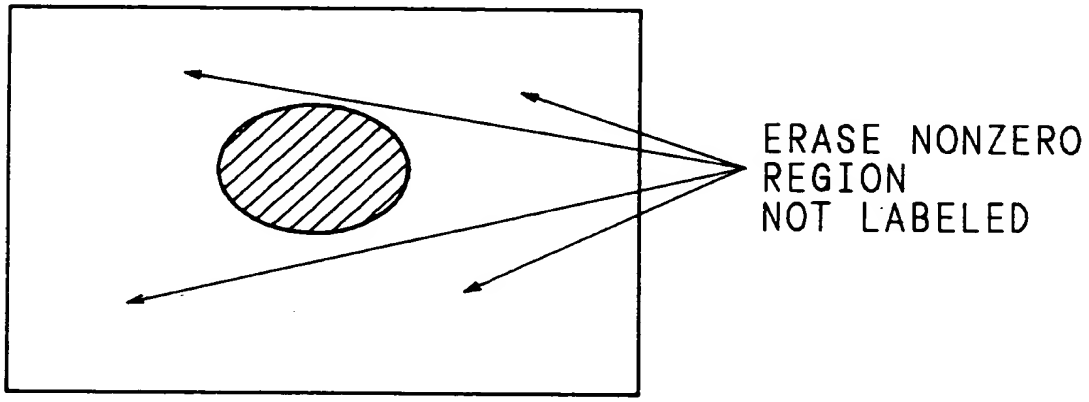


FIG. 43B



US005054094A

FIG. 44

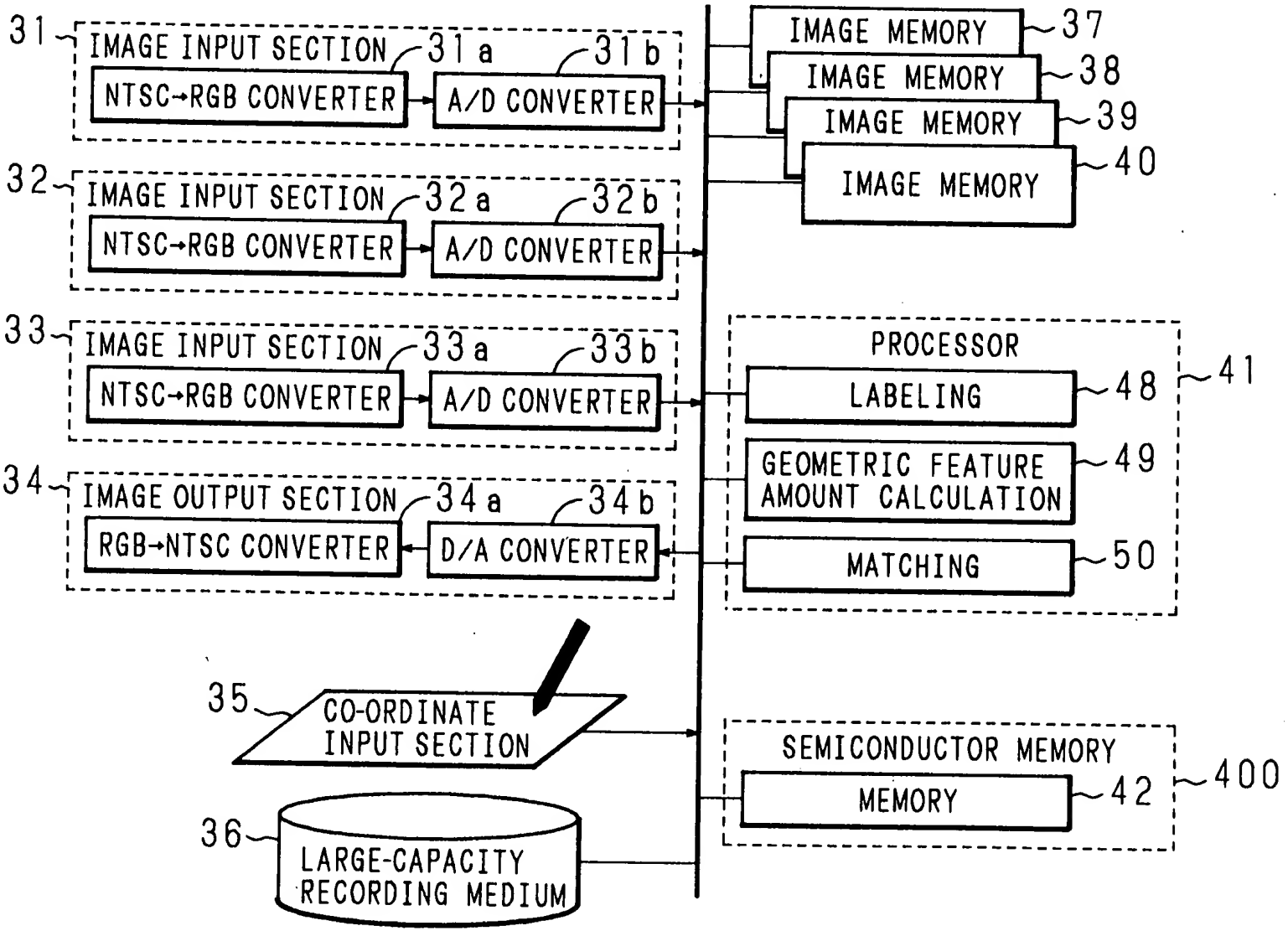
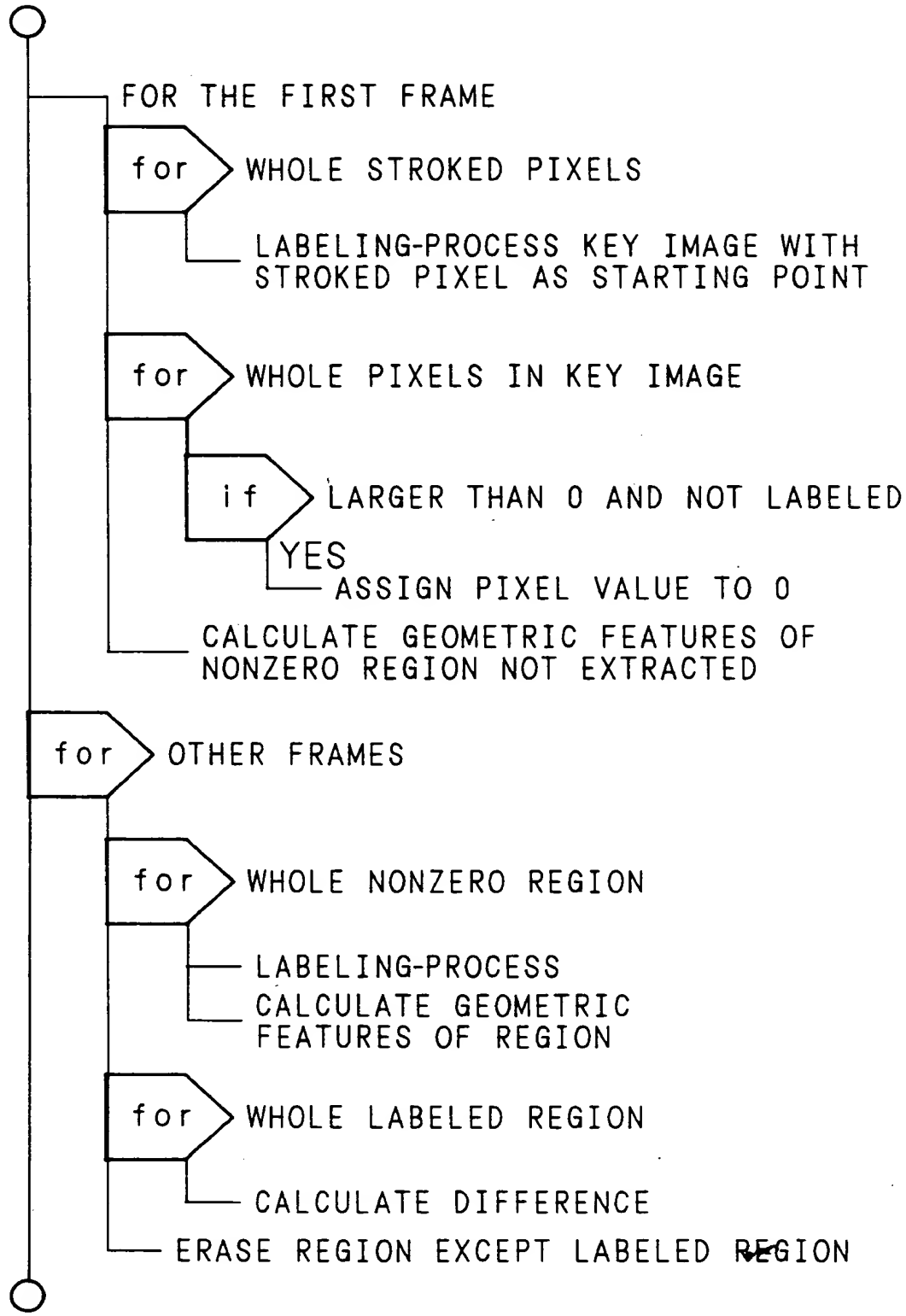

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
LABELING
48
GEOMETRIC FEATURE AMOUNT CALCULATION
49
MATCHING
50
SEMICONDUCTOR MEMORY
400
MEMORY
42

FIG. 45



US 6,546,135 B1

FIG. 46A

FOR THE FIRST FRAME

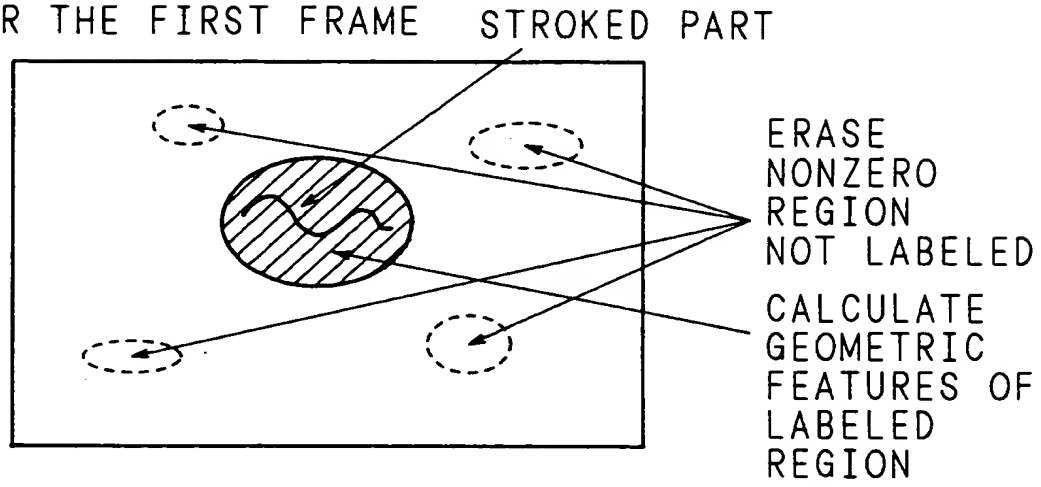


FIG. 46B

FOR THE SECOND FRAME AND AFTER THAT

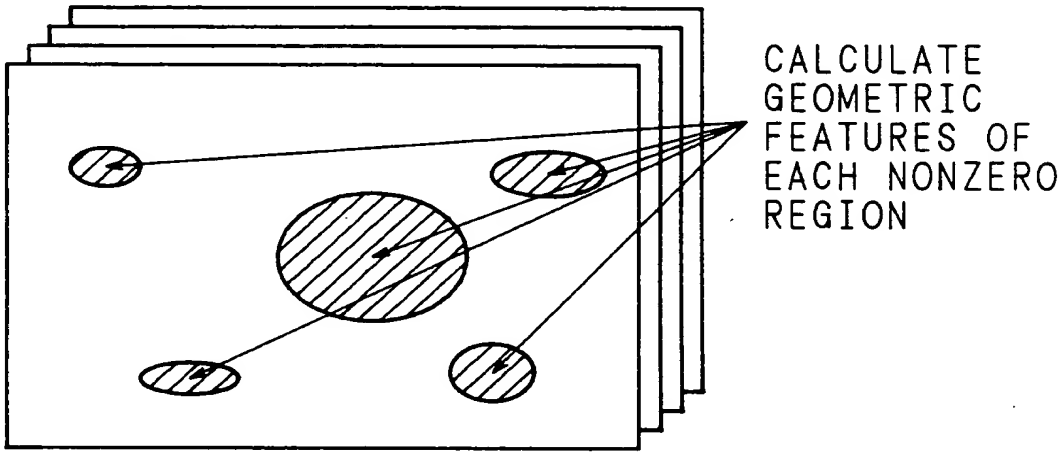
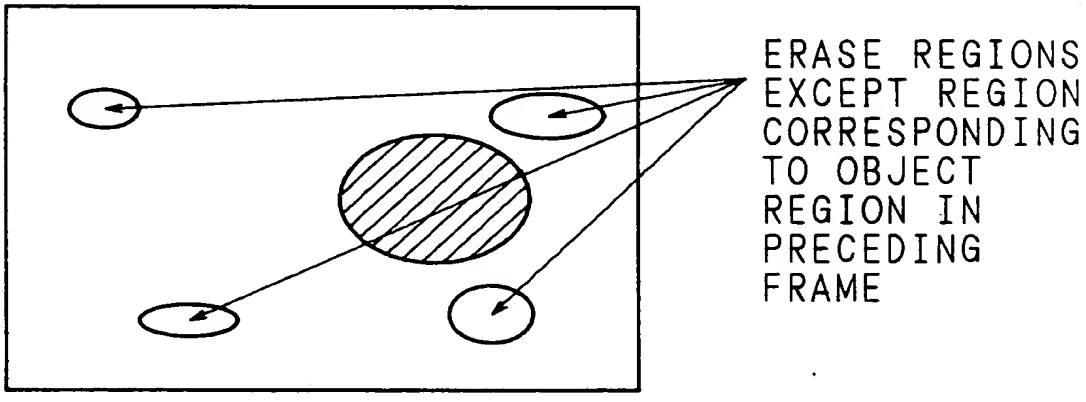


FIG. 46C



0098456-120898-2

FIG. 47

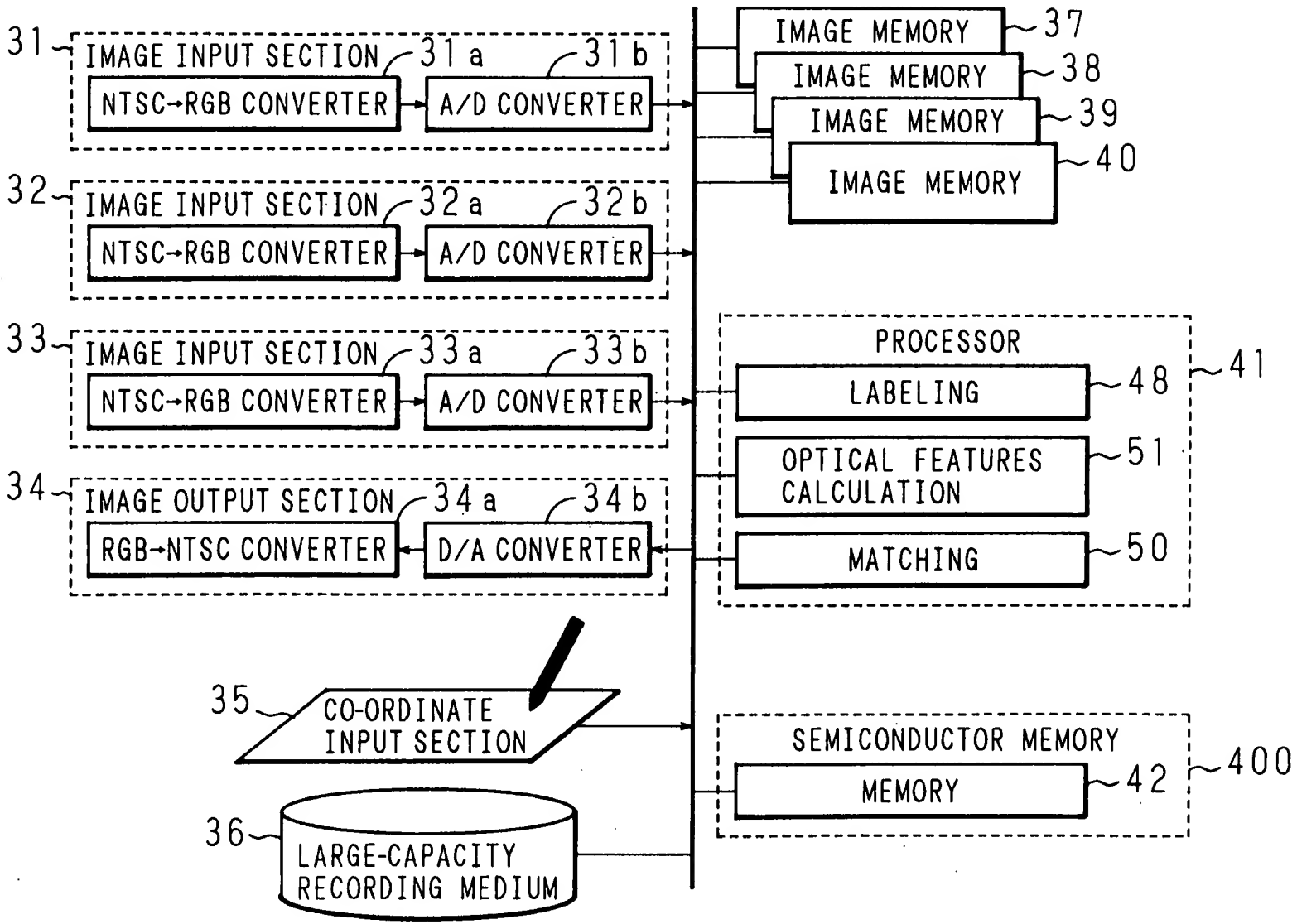
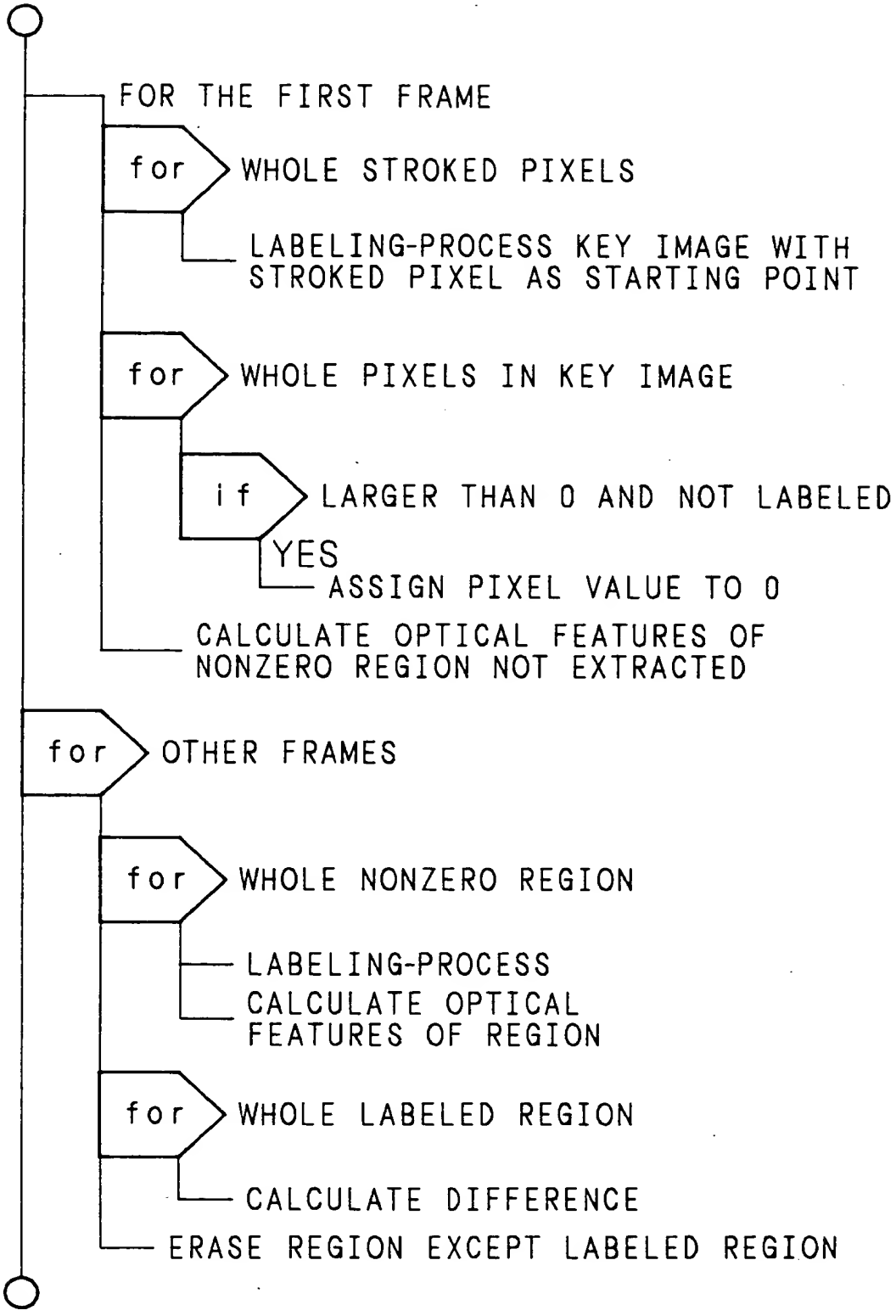

31
IMAGE INPUT SECTION
31a
31b
NTSC→RGB CONVERTER
A/D CONVERTER
32
IMAGE INPUT SECTION
32a
32b
NTSC→RGB CONVERTER
A/D CONVERTER
33
IMAGE INPUT SECTION
33a
33b
NTSC→RGB CONVERTER
A/D CONVERTER
34
IMAGE OUTPUT SECTION
34a
34b
RGB→NTSC CONVERTER
D/A CONVERTER
35
CO-ORDINATE INPUT SECTION
36
LARGE-CAPACITY RECORDING MEDIUM
IMAGE MEMORY
37
IMAGE MEMORY
38
IMAGE MEMORY
39
IMAGE MEMORY
40
PROCESSOR
41
LABELING
48
OPTICAL FEATURES CALCULATION
51
MATCHING
50
SEMICONDUCTOR MEMORY
400
MEMORY
42

FIG. 48



EP 0 398 741 A2

FIG. 49A

FOR THE FIRST FRAME

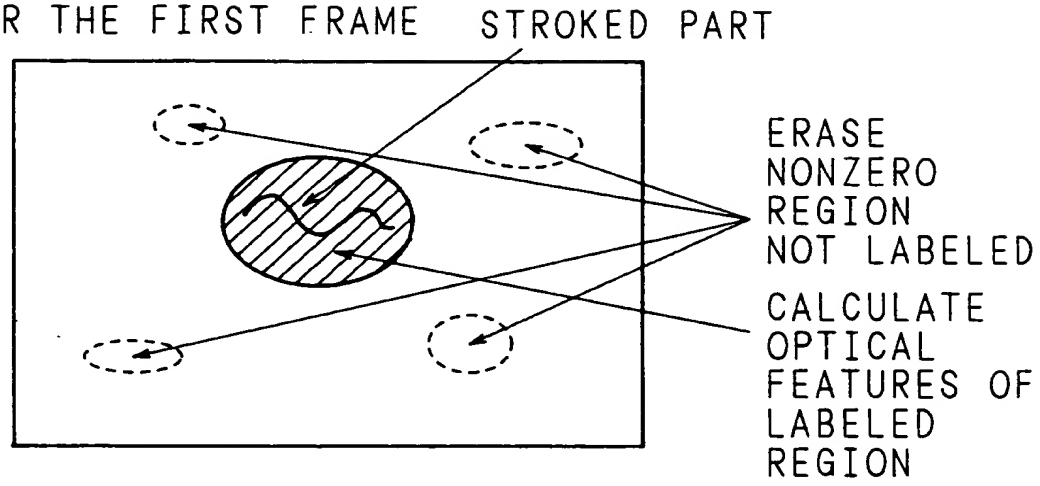


FIG. 49B

FOR THE SECOND FRAME AND AFTER THAT

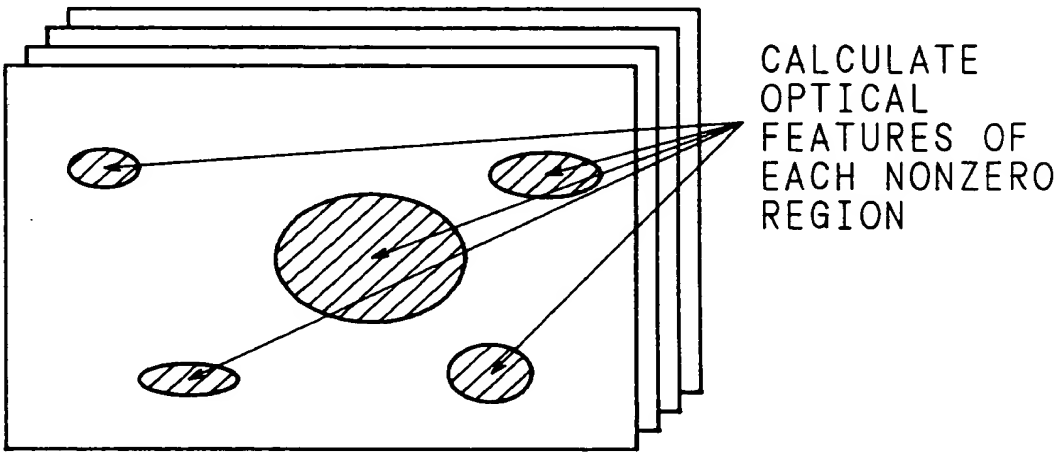
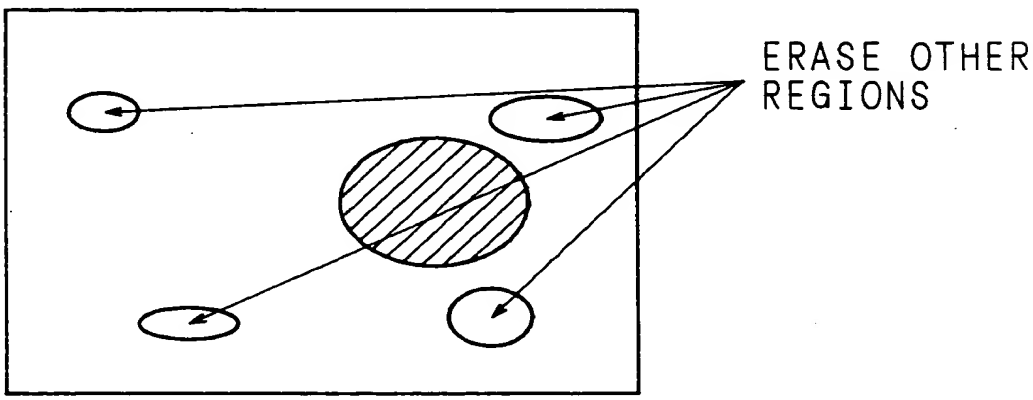


FIG. 49C



0098498 .7200 98

FIG. 50

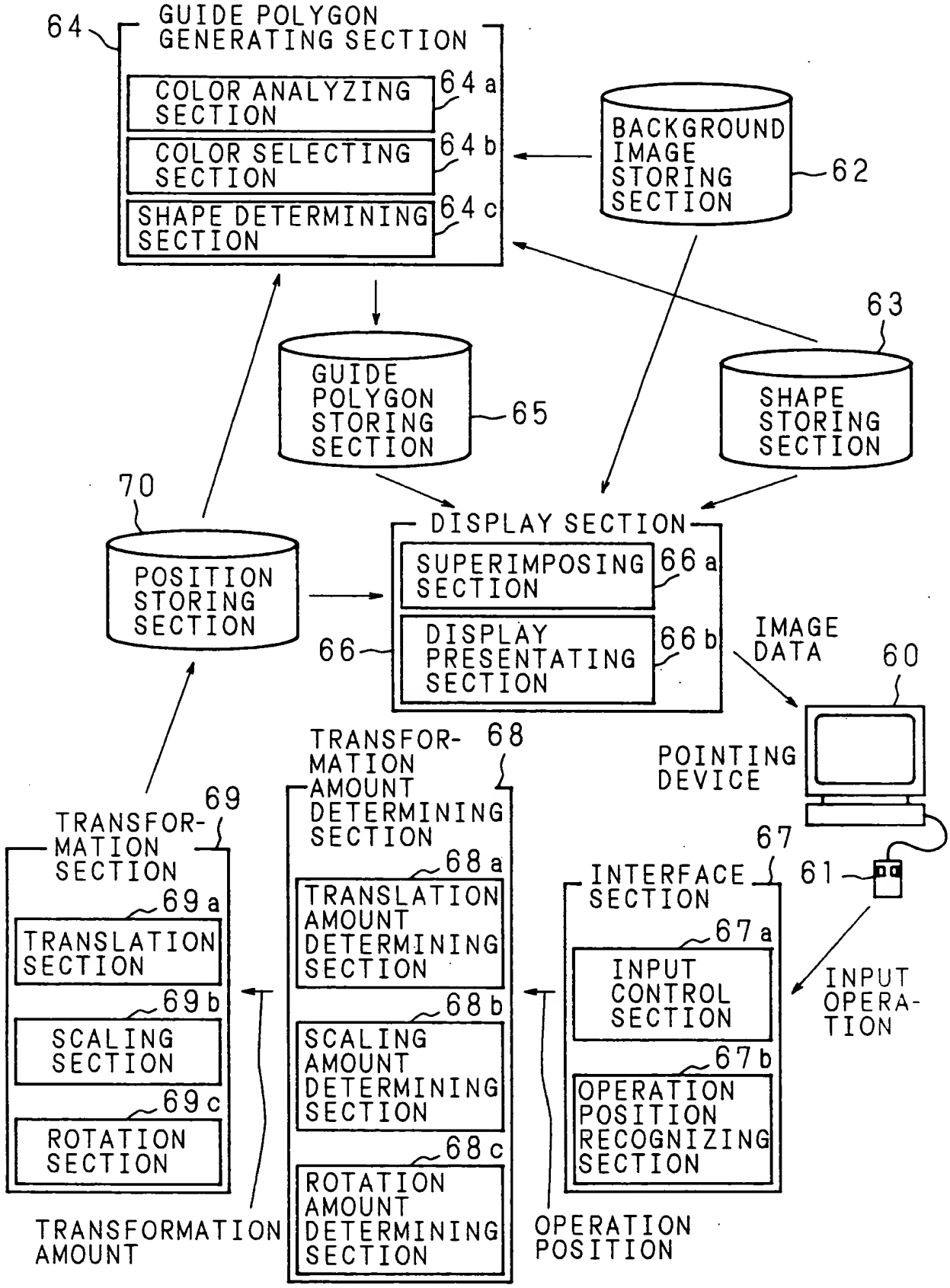
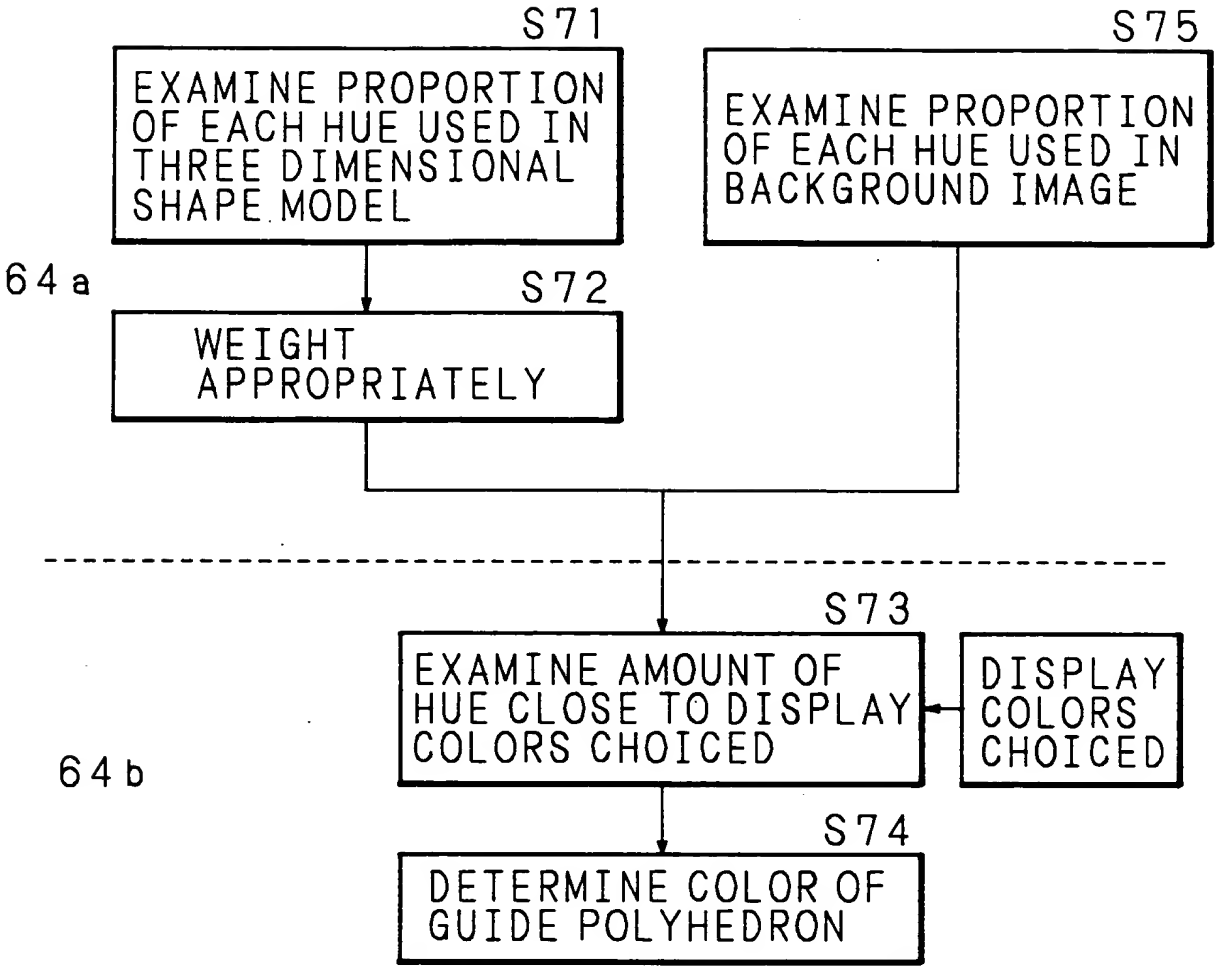
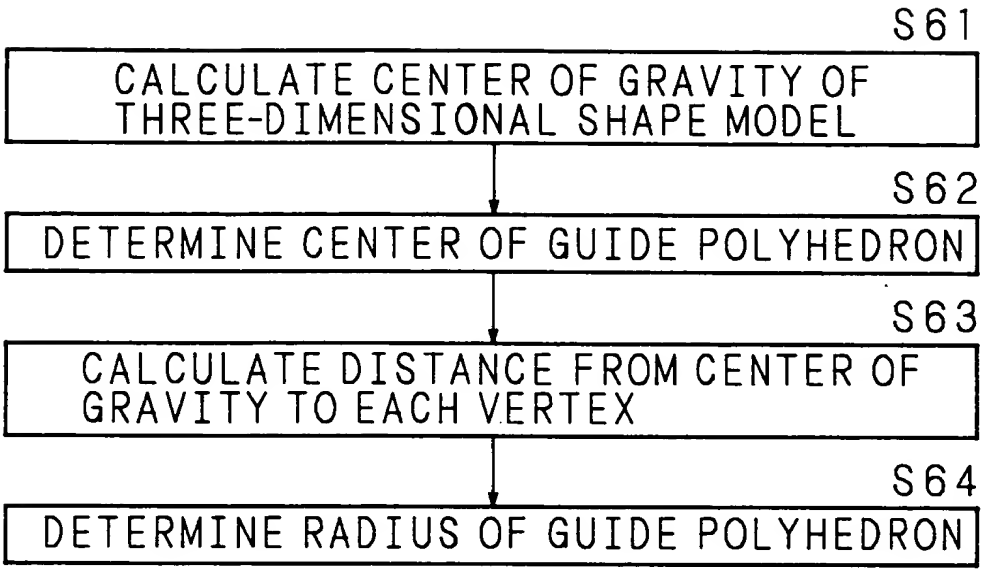

64
GUIDE POLYGON GENERATING SECTION
COLOR ANALYZING SECTION
64 a
COLOR SELECTING SECTION
64 b
SHAPE DETERMINING SECTION
64 c
BACKGROUND IMAGE STORING SECTION
62
63
GUIDE POLYGON STORING SECTION
65
SHAPE STORING SECTION
70
POSITION STORING SECTION
DISPLAY SECTION
SUPERIMPOSING SECTION
66 a
66
DISPLAY PRESENTATING SECTION
66 b
IMAGE DATA
60
POINTING DEVICE
TRANSFOR-MATION SECTION
69
69 a
TRANSLATION SECTION
69 b
SCALING SECTION
69 c
ROTATION SECTION
TRANSFOR-MATION AMOUNT DETERMINING SECTION
68
68 a
TRANSLATION AMOUNT DETERMINING SECTION
68 b
SCALING AMOUNT DETERMINING SECTION
68 c
ROTATION AMOUNT DETERMINING SECTION
INTERFACE SECTION
67
61
67 a
INPUT CONTROL SECTION
67 b
OPERATION POSITION RECOGNIZING SECTION
INPUT OPERA-TION
TRANSFORMATION AMOUNT
OPERATION POSITION

FIG. 51



Document: EP0903694

FIG. 52



US 9,916,686 B2

FIG. 53

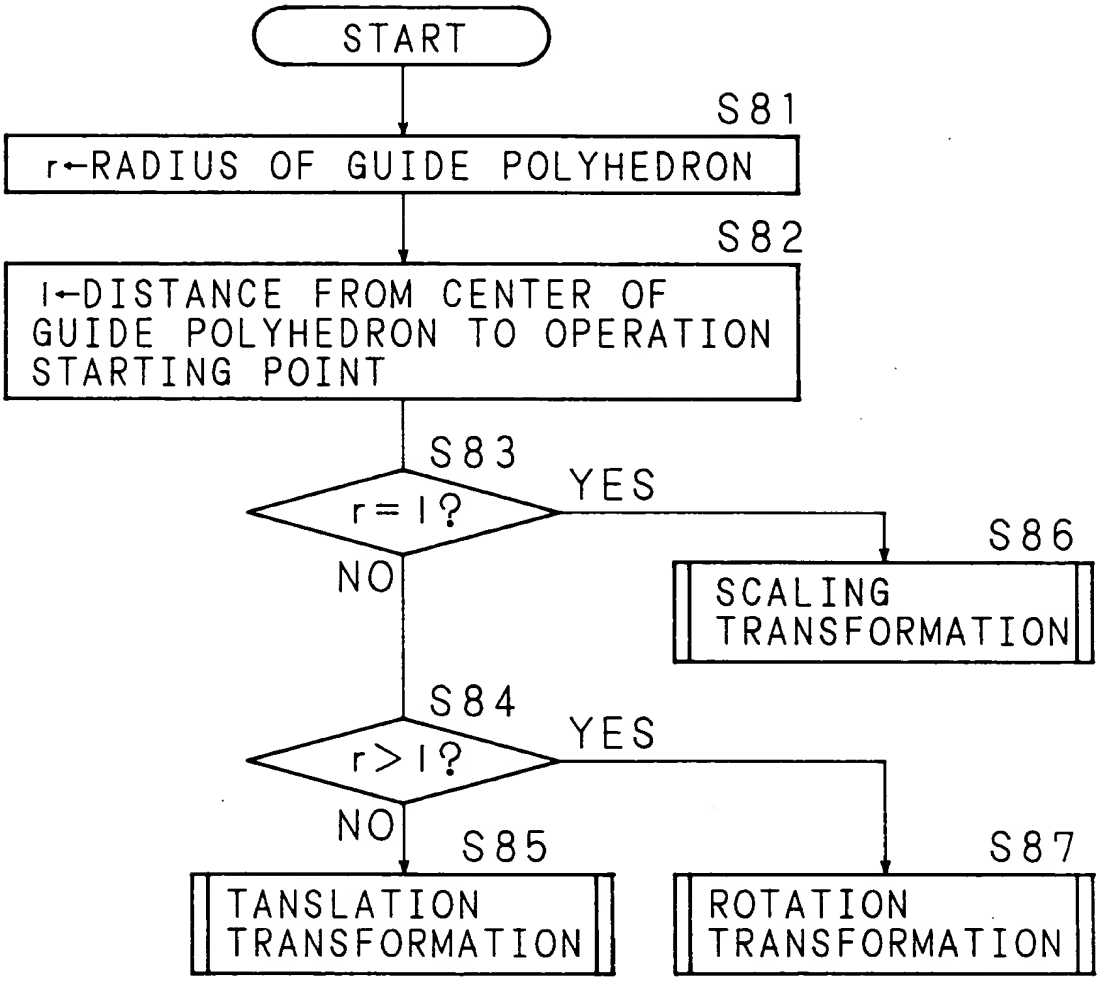
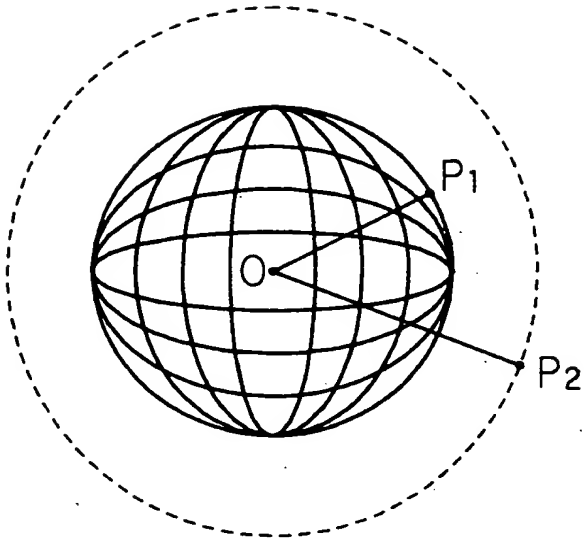

START
S81
r←RADIUS OF GUIDE POLYHEDRON
S82
l←DISTANCE FROM CENTER OF GUIDE POLYHEDRON TO OPERATION STARTING POINT
S83
r=l?
YES
NO
S86
SCALING TRANSFORMATION
S84
r>l?
YES
NO
S85
TANSLATION TRANSFORMATION
S87
ROTATION TRANSFORMATION

FIG. 54



0 0 0 5 4 5 6 9 = P U 0 0 3 0

FIG. 55

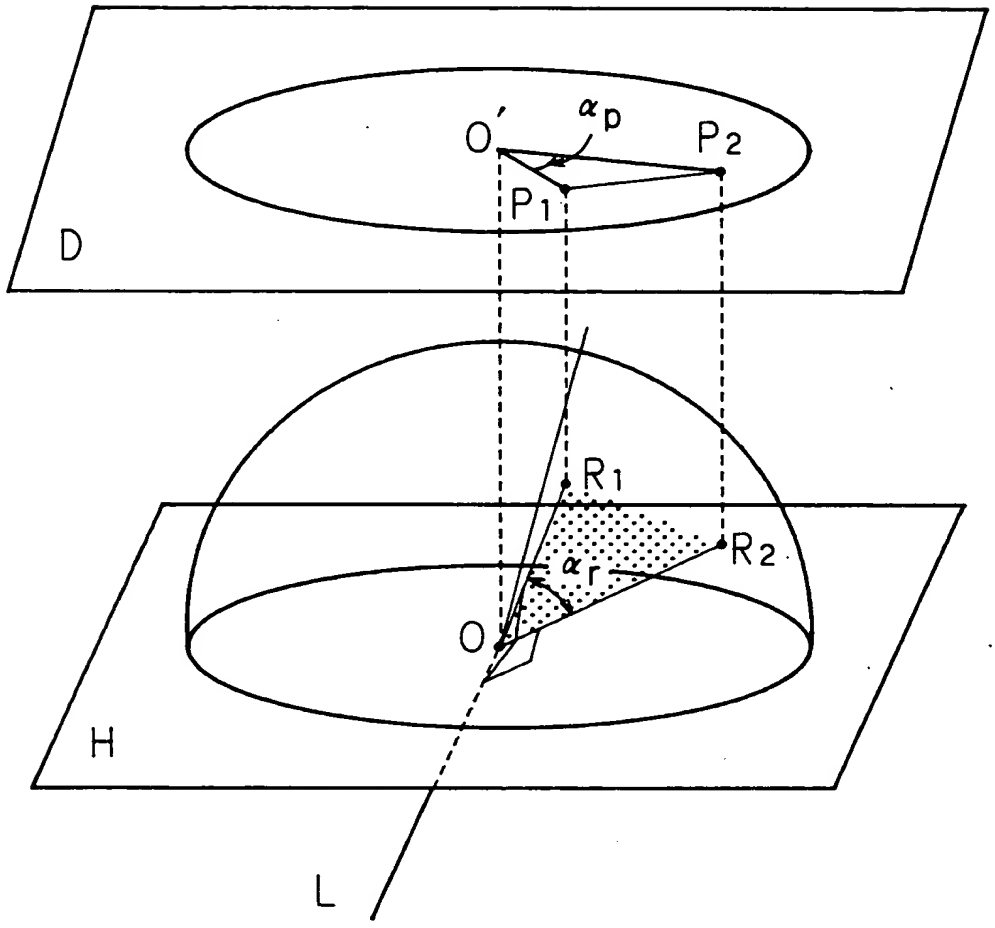


FIG. 56

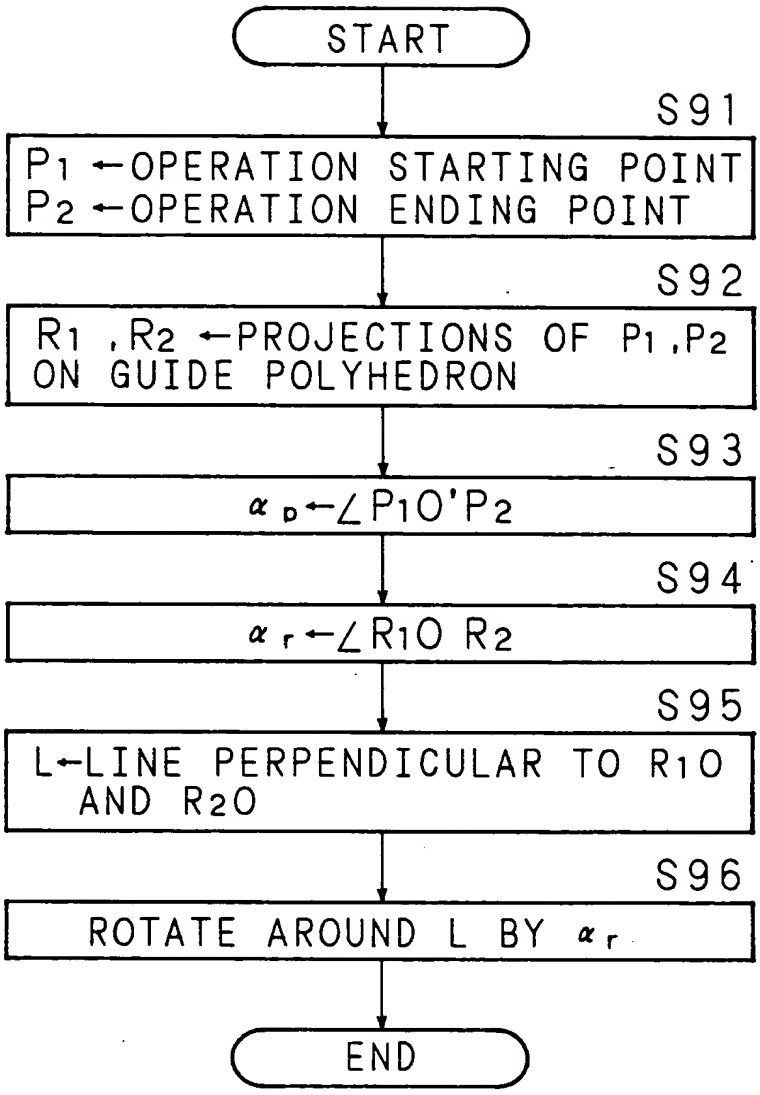

START
S91
P1 ←OPERATION STARTING POINT
P2 ←OPERATION ENDING POINT
S92
R1 , R2 ←PROJECTIONS OF P1 , P2 ON GUIDE POLYHEDRON
S93
αD←∠P1O'P2
S94
αr←∠R1O R2
S95
L←LINE PERPENDICULAR TO R1O AND R2O
S96
ROTATE AROUND L BY αr
END

FIG. 57

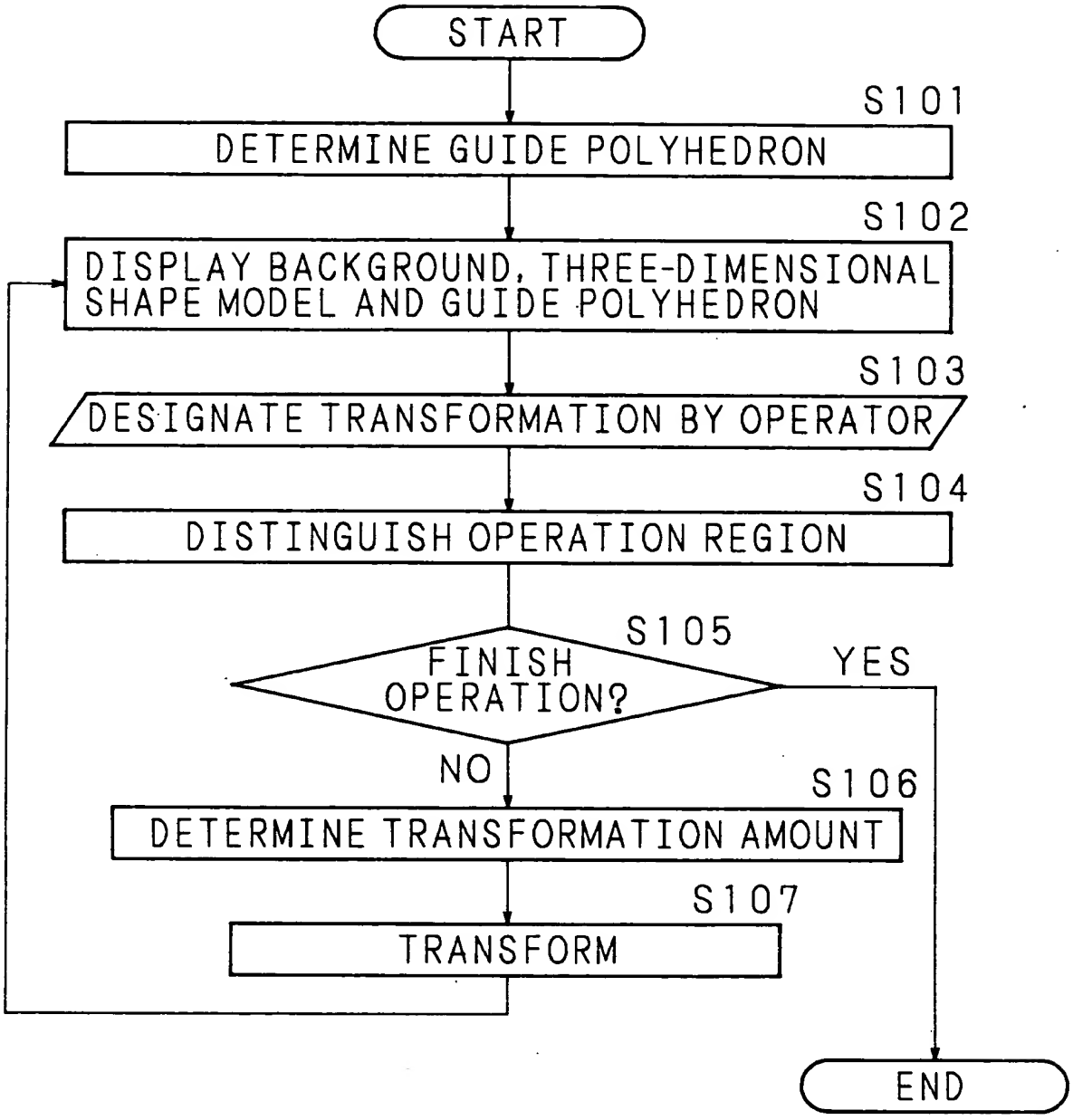

START
S101
DETERMINE GUIDE POLYHEDRON
S102
DISPLAY BACKGROUND, THREE-DIMENSIONAL SHAPE MODEL AND GUIDE POLYHEDRON
S103
DESIGNATE TRANSFORMATION BY OPERATOR
S104
DISTINGUISH OPERATION REGION
S105
FINISH OPERATION?
YES
NO
S106
DETERMINE TRANSFORMATION AMOUNT
S107
TRANSFORM
END

FIG. 58

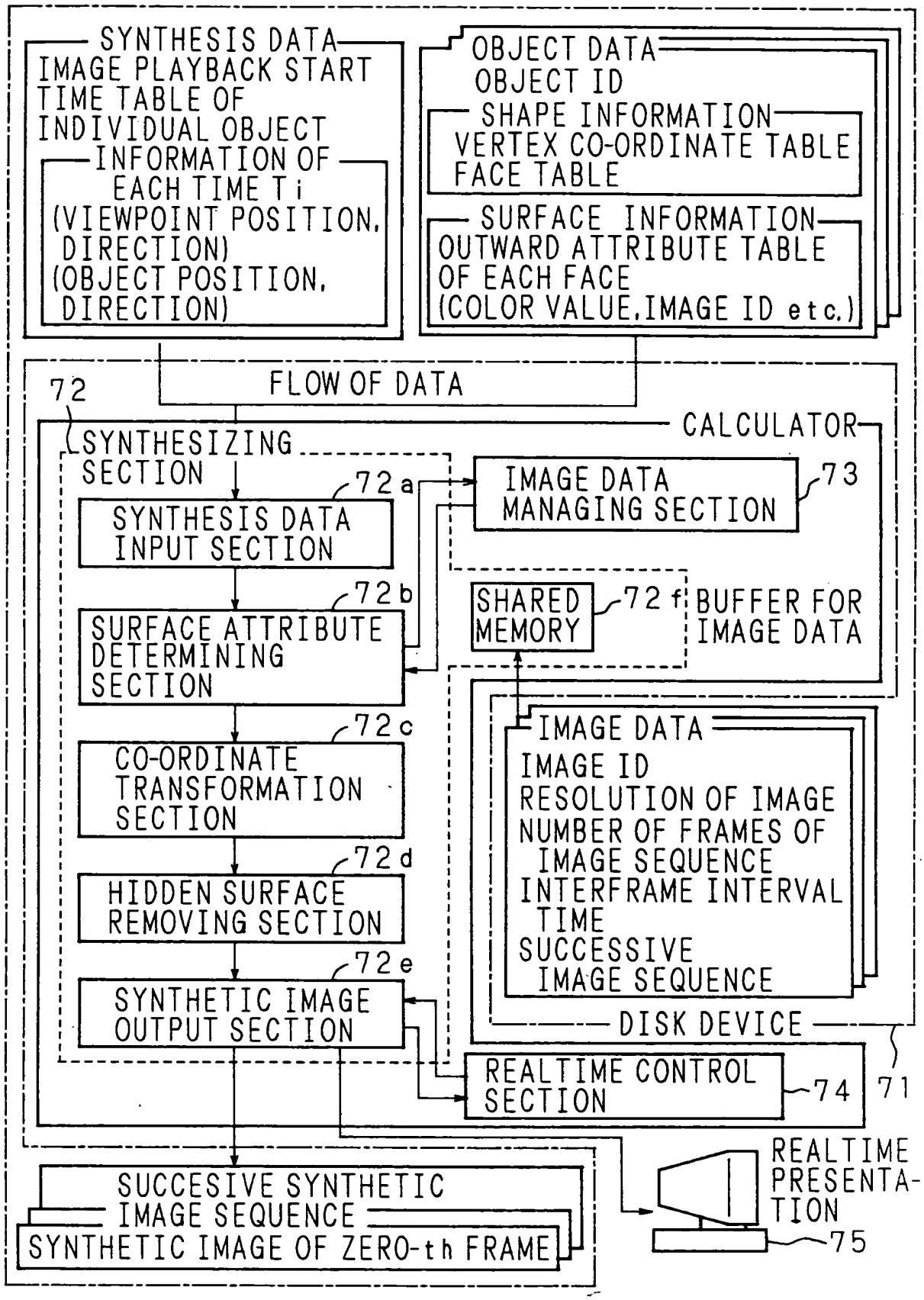

SYNTHESIS DATA
IMAGE PLAYBACK START TIME TABLE OF INDIVIDUAL OBJECT
INFORMATION OF EACH TIME Ti
(VIEWPOINT POSITION, DIRECTION)
(OBJECT POSITION, DIRECTION)
OBJECT DATA
OBJECT ID
SHAPE INFORMATION
VERTEX CO-ORDINATE TABLE
FACE TABLE
SURFACE INFORMATION
OUTWARD ATTRIBUTE TABLE OF EACH FACE
(COLOR VALUE, IMAGE ID etc.)
FLOW OF DATA
72
CALCULATOR
SYNTHESIZING SECTION
72a
SYNTHESIS DATA INPUT SECTION
72b
SURFACE ATTRIBUTE DETERMINING SECTION
72c
CO-ORDINATE TRANSFORMATION SECTION
72d
HIDDEN SURFACE REMOVING SECTION
72e
SYNTHETIC IMAGE OUTPUT SECTION
IMAGE DATA MANAGING SECTION
73
SHARED MEMORY
72f
BUFFER FOR IMAGE DATA
IMAGE DATA
IMAGE ID
RESOLUTION OF IMAGE
NUMBER OF FRAMES OF IMAGE SEQUENCE
INTERFRAME INTERVAL TIME
SUCCESSIVE IMAGE SEQUENCE
DISK DEVICE
71
REALTIME CONTROL SECTION
74
SUCCESIVE SYNTHETIC IMAGE SEQUENCE
SYNTHETIC IMAGE OF ZERO-th FRAME
REALTIME PRESENTATION
75

FIG. 59

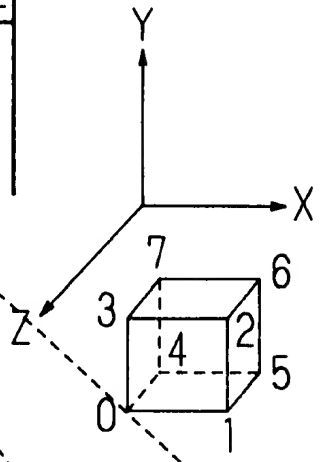
OBJECT TABLE

N	OBJECT ID	SHAPE INFORMATION: VERTEX CO-ORDINATE TABLE	SHAPE INFORMATION: FACE TABLE	SURFACE INFORMATION	IMAGE PLAYBACK START TIME
	0x80000001	POINTER	POINTER	POINTER	NIL
	0x40000002				100
	0x40000003				50
	0x00000004				NIL

8	VERTEX ID	CO-ORDINATE(X, Y, Z)
	0	0 0 100
	1	100 0 100
	2	100 100 100
	3	0 100 100
	4	0 0 0
	5	100 0 0
	6	100 100 0
	7	0 100 0

6	FACE ID	VERTEX ID
	0	0 1 2 3
	1	1 5 6 2
	2	5 4 7 6
	3	4 0 7 3
	4	3 2 6 7
	5	4 5 1 0

EXAMPLE OF OBJECT
0x40000002
(RECTANGULAR PARALLELEPIPED)



6	FACE ID	IMAGE ID	START FRAME NUMBER	COLOR VALUE(RGB) /POINTER TO IMAGE DATA	DIFFUSION COEFFICIENT	REFLECTION COEFFICIENT	TRANSMISSION COEFFICIENT
	0	MOVIE-0001	15		0.6	0.0	0.0
	1	MOVIE-0002	15		0.6	0.0	0.0
	2	NIL	0	255 0 50	0.4	0.1	0.0
	3	MOVIE-0004	15		0.6	0.0	0.0
	4	MOVIE-0005	15		0.3	0.0	0.0
	5	NIL	0	0 255 100	0.5	0.1	0.0

FIG. 60

N	TIME OF SYNTHETIC SCENE	VIEWPOINT INFORMATION		OBJECT INFORMATION	
		POSITION (X,Y,Z)	DIRECTION (X,Y,Z)	NUMBER OF OBJECT	INFORMATION ABOUT INDIVIDUAL OBJECT
	0	200 200 200	0 0 −1	10	(POINTER TO TABLE)
	100	200 200 190	0 0 −1	10	
	200	200 200 180	0 0 −1	10	
	300	200 200 170	0 0 −1	10	
	400	200 200 160	0 0 −1	10	
	500	200 200 150	0 0 −1	10	
	⋮	⋮	⋮	⋮	

10	OBJECT ID	CENTER (X,Y,Z)	ROTATION (X,Y,Z)
	0×80000001	500 500 500	0 10 0
	0×40000002	100 100 100	0 0 0
	0×40000003	100 50 50	0 30 10
	⋮	⋮	⋮
	0×00000010	30 200 100	0 50 0

FIG. 61

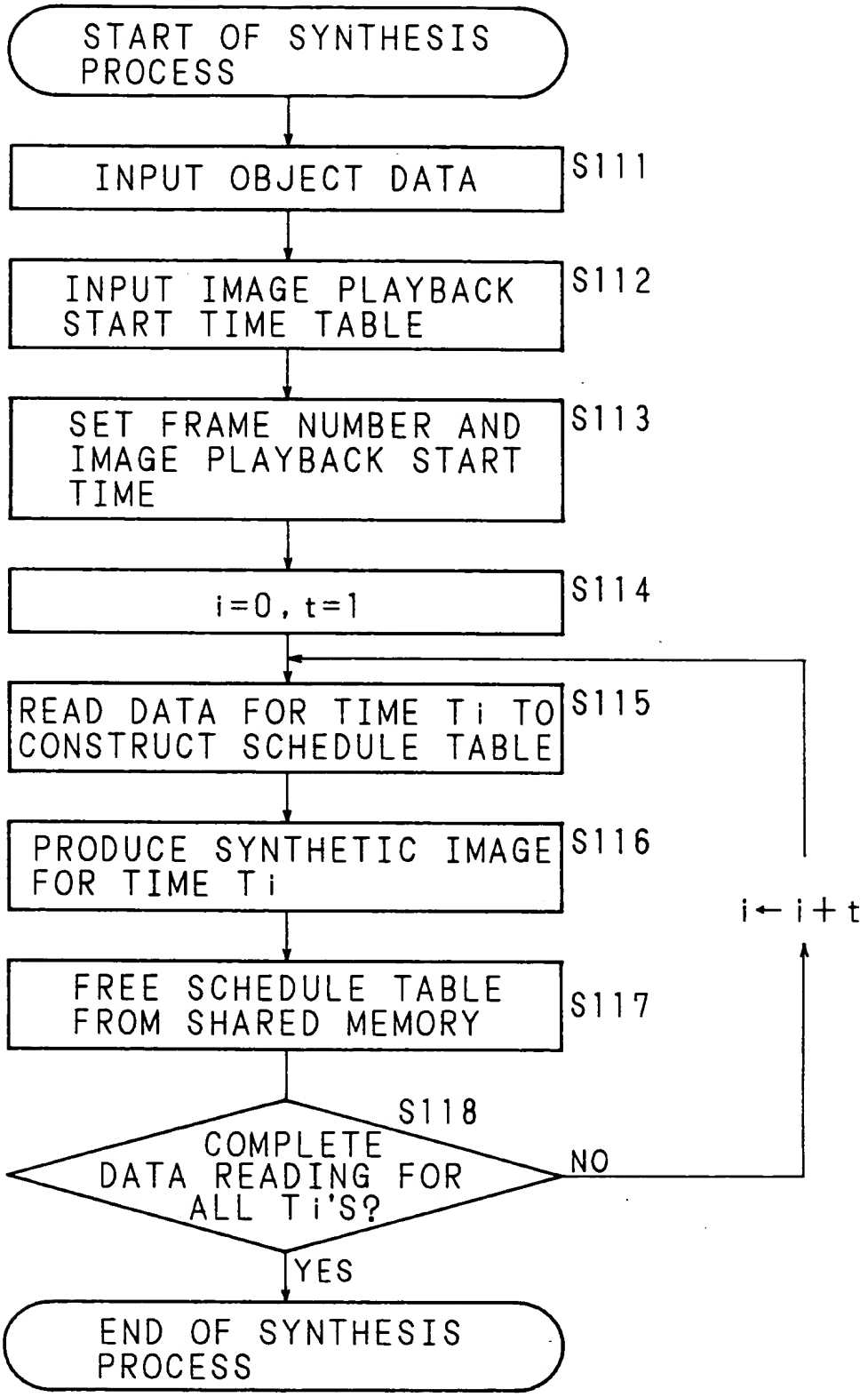

START OF SYNTHESIS PROCESS
INPUT OBJECT DATA
S111
INPUT IMAGE PLAYBACK START TIME TABLE
S112
SET FRAME NUMBER AND IMAGE PLAYBACK START TIME
S113
i=0, t=1
S114
READ DATA FOR TIME Ti TO CONSTRUCT SCHEDULE TABLE
S115
PRODUCE SYNTHETIC IMAGE FOR TIME Ti
S116
i ← i+t
FREE SCHEDULE TABLE FROM SHARED MEMORY
S117
S118
COMPLETE DATA READING FOR ALL Ti'S?
NO
YES
END OF SYNTHESIS PROCESS

FIG. 62

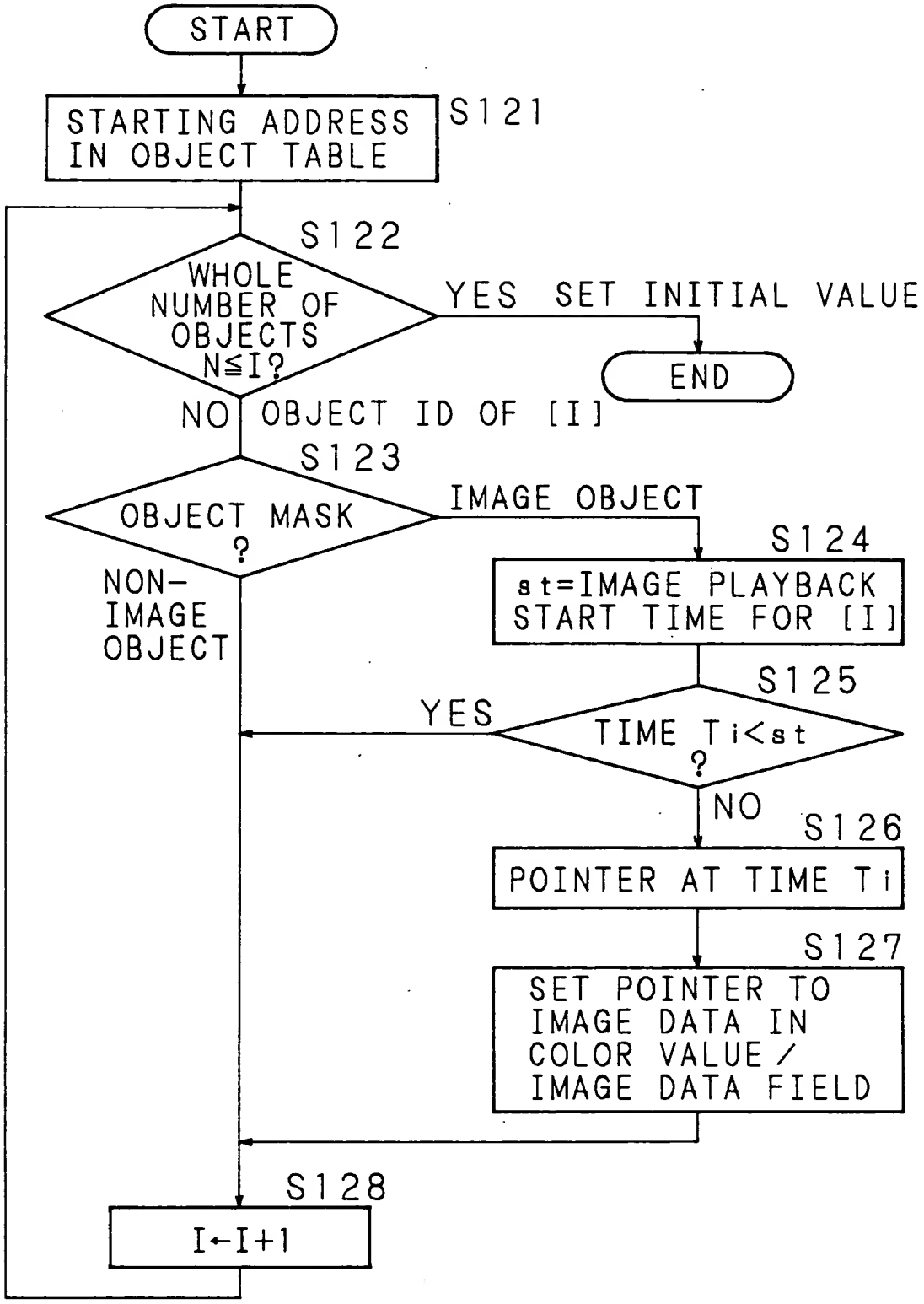

START
STARTING ADDRESS IN OBJECT TABLE
S121
S122
WHOLE NUMBER OF OBJECTS N≦I?
YES SET INITIAL VALUE
END
NO OBJECT ID OF [I]
S123
OBJECT MASK ?
IMAGE OBJECT
NON-IMAGE OBJECT
S124
st=IMAGE PLAYBACK START TIME FOR [I]
S125
YES
TIME Ti<st ?
NO
S126
POINTER AT TIME Ti
S127
SET POINTER TO IMAGE DATA IN COLOR VALUE / IMAGE DATA FIELD
S128
I←I+1

FIG. 63

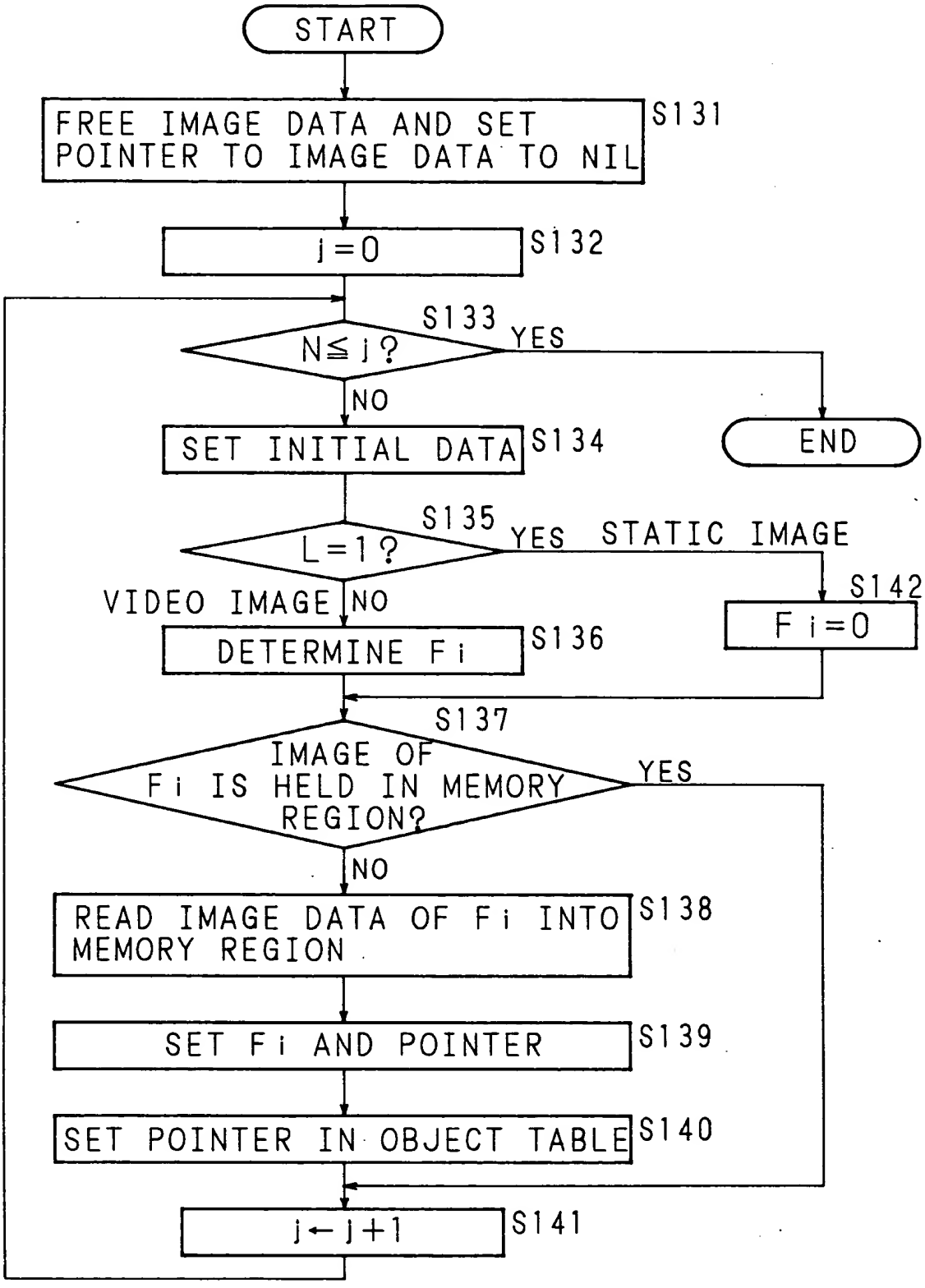

START
FREE IMAGE DATA AND SET POINTER TO IMAGE DATA TO NIL
S131
j=0
S132
S133
N≦j?
YES
NO
END
SET INITIAL DATA
S134
S135
L=1?
YES
STATIC IMAGE
VIDEO IMAGE
NO
S142
Fi=0
DETERMINE Fi
S136
S137
IMAGE OF Fi IS HELD IN MEMORY REGION?
YES
NO
READ IMAGE DATA OF Fi INTO MEMORY REGION
S138
SET Fi AND POINTER
S139
SET POINTER IN OBJECT TABLE
S140
j←j+1
S141

FIG. 64

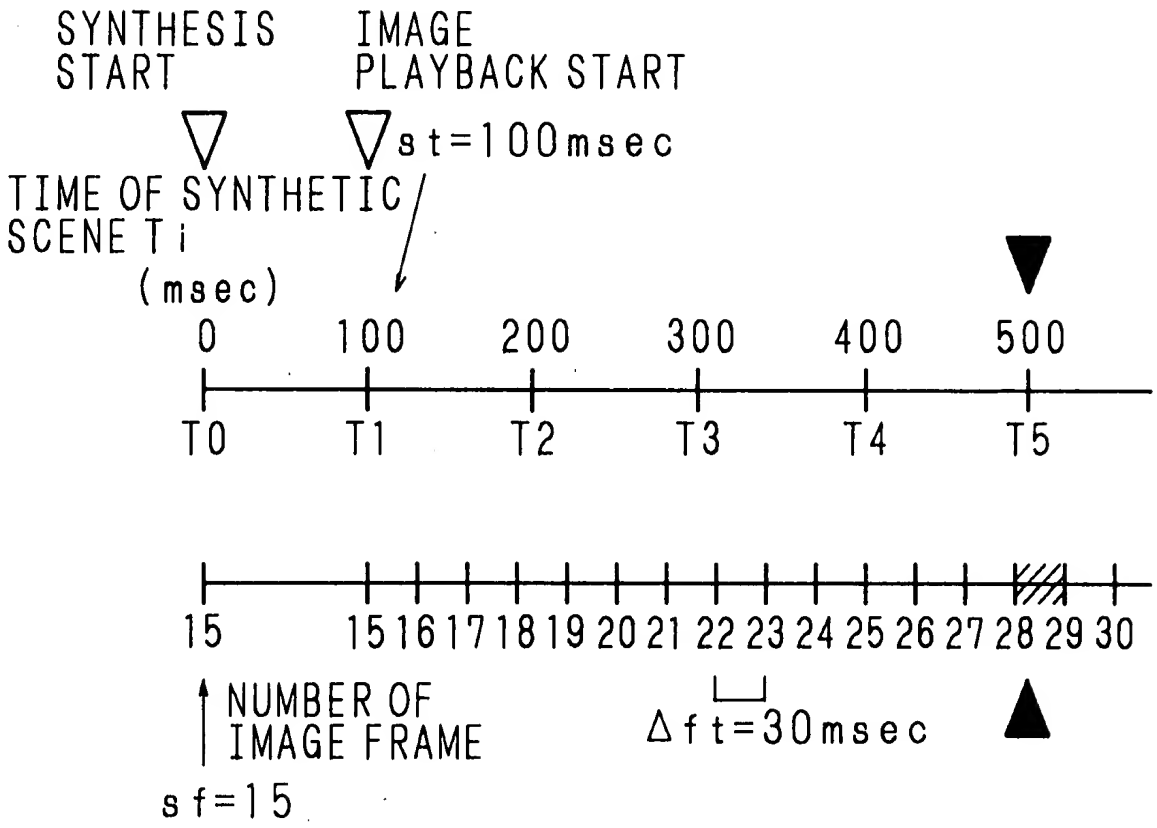

SYNTHESIS START
IMAGE PLAYBACK START
st=100msec
TIME OF SYNTHETIC SCENE Ti (msec)
0
100
200
300
400
500
T0
T1
T2
T3
T4
T5
15
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
NUMBER OF IMAGE FRAME
Δft=30msec
sf=15

FIG. 65

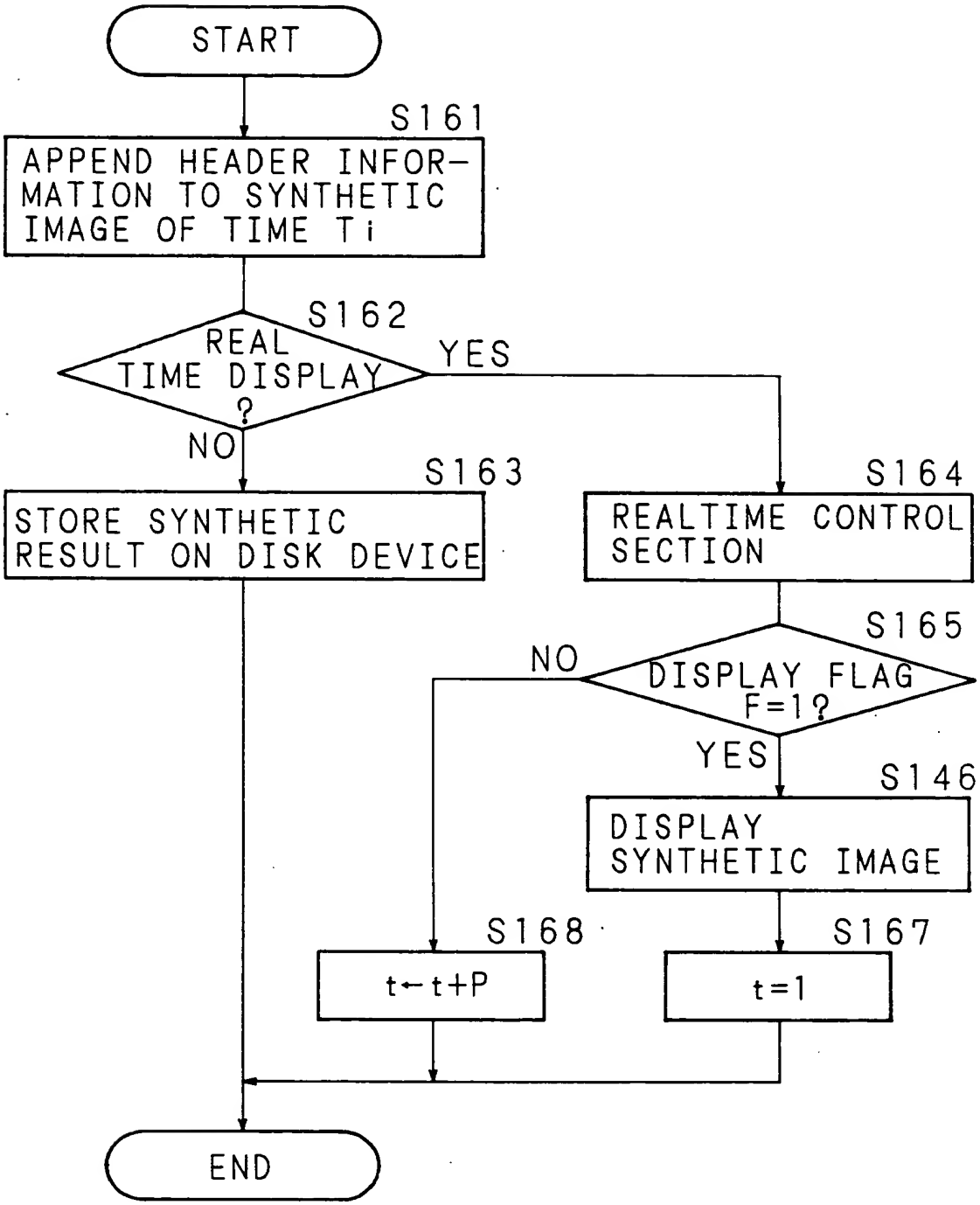

START
S161
APPEND HEADER INFORMATION TO SYNTHETIC IMAGE OF TIME Ti
S162
REAL TIME DISPLAY ?
YES
NO
S163
STORE SYNTHETIC RESULT ON DISK DEVICE
S164
REALTIME CONTROL SECTION
S165
DISPLAY FLAG F=1?
NO
YES
S146
DISPLAY SYNTHETIC IMAGE
S168
t←t+P
S167
t=1
END

FIG. 66

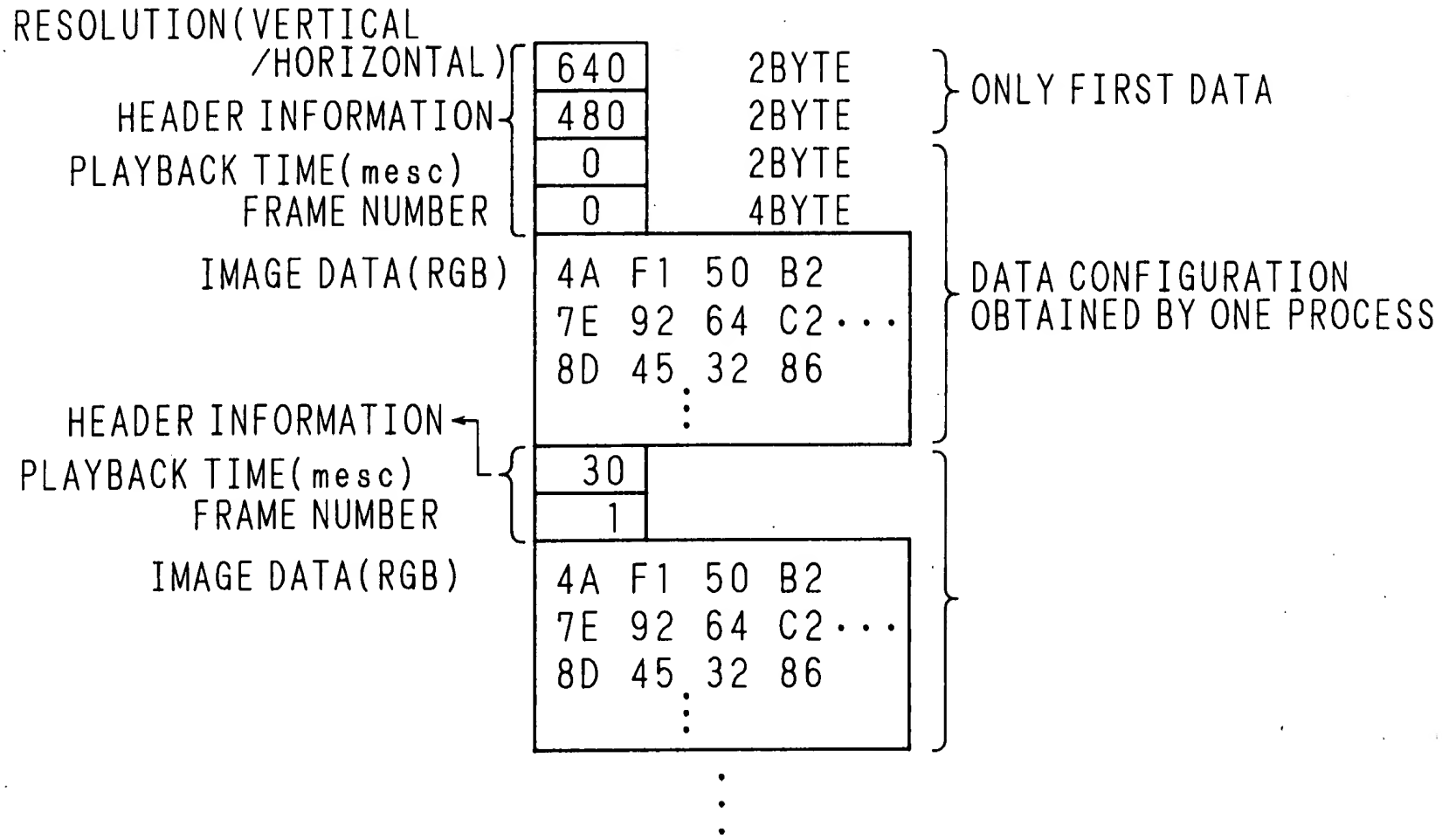
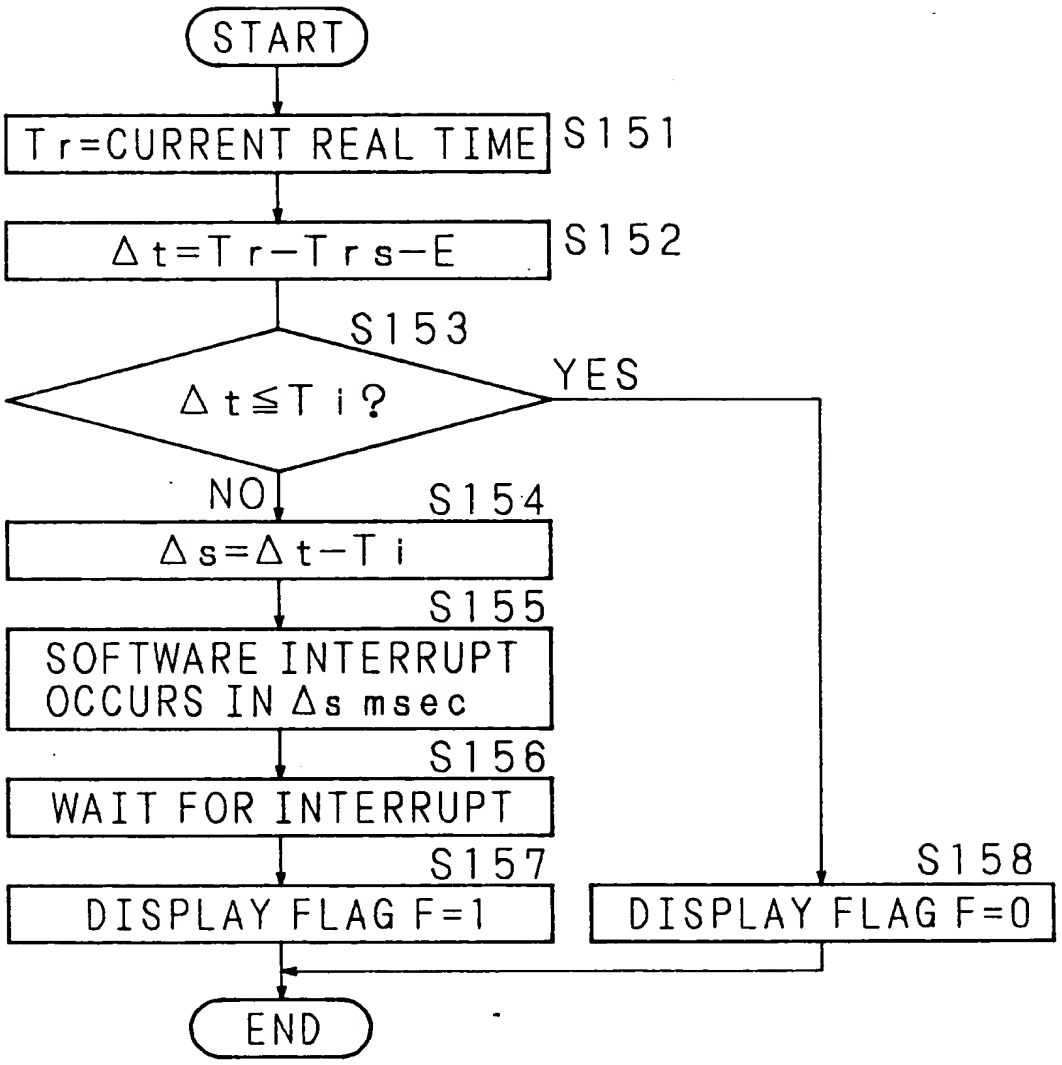

RESOLUTION(VERTICAL /HORIZONTAL)
640
2BYTE
HEADER INFORMATION
480
2BYTE
ONLY FIRST DATA
PLAYBACK TIME(mesc)
0
2BYTE
FRAME NUMBER
0
4BYTE
IMAGE DATA(RGB)
4A F1 50 B2
7E 92 64 C2 ···
8D 45 32 86
DATA CONFIGURATION OBTAINED BY ONE PROCESS
HEADER INFORMATION
PLAYBACK TIME(mesc)
30
FRAME NUMBER
1
IMAGE DATA(RGB)
4A F1 50 B2
7E 92 64 C2 ···
8D 45 32 86

FIG. 67


START
Tr=CURRENT REAL TIME
S151
Δt=Tr−Trs−E
S152
S153
Δt≦Ti?
YES
NO
S154
Δs=Δt−Ti
S155
SOFTWARE INTERRUPT OCCURS IN Δs msec
S156
WAIT FOR INTERRUPT
S157
DISPLAY FLAG F=1
S158
DISPLAY FLAG F=0
END